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2100449

ACCESS AGREEMENT

THIS ACCESS AGREEMENT ("Agreement") is entered into this 1ST day of MARCH, 2005, by and between Newell Holdings Delaware, Inc. ("Newell") and Rock Springs Enterprises, Inc. ("Owner").

WHEREAS, Owner owns property located at _____, which is referred to hereinafter as the "Property" and is legally described as Parcel No. 2 in the Quit Claim Deed attached as Exhibit 1, but excluding that portion of Parcel No. 2 that Rock Springs transferred to Hans Dietz Apartments, LLP, as recorded in the Quitclaim Deed attached as Exhibit 2;

WHEREAS, Newell entered into an Administrative Order by Consent for Removal Response Action ("Order") with the United States Environmental Protection Agency ("U.S. EPA") regarding the removal of certain surface and subsurface contamination of the Property; and

WHEREAS, Newell desires access to the Property for the purpose of effectuating the Order;

WHEREAS, the environmental services to be performed by Newell and Newell's contractors may include, among other activities, drilling, boring, excavation and other subsurface activity, sampling and the use of heavy equipment, all of which involve an inherent risk to the Property; and

WHEREAS, Owner understands these risks and desires to grant Newell and its contractors the right to enter its premises for the purpose of effectuating the Order;

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Newell and Owner hereby agree as follows.

1. Grant of Access to Newell. Owner grants to Newell and its authorized agents, contractors and subcontractors, access to and the right to enter upon the Property for the sole purpose of effectuating the Order, which is attached to this Agreement as Exhibit 3. Owner agrees not to grant any other party access to this Property without the prior written consent of Newell; provided, however, that

Newell will grant such permission, unless granting permission would compromise its ability to effectuate the Order.

2. Cooperation. Owner must cooperate fully with Newell and must take all actions necessary to allow Newell to complete the Work in the most expeditious manner possible, at least to the extent that Owner does not incur a cost for such cooperation or actions. Notwithstanding the limitations in the immediately preceding sentence, Owner must refrain from accessing or using portions of the Property in any manner that would compromise, in Newell's judgment, Newell's ability to effectuate the Order; provided, however, that if U.S. EPA determines that Owner's use of the Property would not compromise Newell's ability to effectuate the Order, then Owner may access or use the property or portions thereof, as the case may be, consistent with U.S. EPA's determination.

3. Grant of Access to U.S. EPA. Owner grants to U.S. EPA and its employees, agents, consultants, contractors and other authorized or designated representatives access to the Property for the sole purpose of effectuating the Order. Such access shall include access to conduct all activities described in Paragraph 11.3 of the Order.

4. The Work. All actions that Newell must take pursuant to the Order will be referred to throughout the rest of this Agreement as "the Work."

5. Newell's Precautions. Newell will take all reasonable precautions necessary to minimize damage to the Property.

6. Indemnification. Owner will defend, indemnify and hold Newell harmless from and against all suits, claims, damages, actions, penalties, losses, costs, expenses, judgments and decrees, including reasonable attorneys fees and costs, arising from loss or injury to persons or property that has been or may be caused by Newell, its representatives, agents or contractors while performing Work on or

about the Property; provided, however, that Newell will defend, indemnify and hold Owner harmless from and against all suits, claims, damages, actions, penalties, liabilities, losses, costs, expenses, judgments and decrees, including reasonable attorneys fees and costs, arising from loss or injury to persons or property that has been or may be caused solely by the negligence of Newell, its representatives, agents or contractors while performing Work on or about the Property.

7. Subsurface Hazards. Prior to the performance of the Work, Owner must provide Newell with the identity, description and location of all subsurface facilities at or obstructions or improvements to the Property in writing, to the extent that Owner knows or otherwise possesses this information. Newell will have no responsibility or liability to Owner for any damage arising from Owner's failure to accurately identify and locate such subsurface facilities, obstructions or improvements as required by the immediately preceding sentence.

8. Data and Reports. Newell must provide to Owner upon request a summary of the results of any inspections, sampling or other testing performed as part of the Work. At the conclusion of the Work, Newell must provide to Owner a copy of the Final Report, including all certifications included in that report, if any, regarding the removal of hazardous waste.

9. Insurance. Newell and its employees, contractors or agents must maintain, during the term of this Agreement, insurance coverage in the amounts shown on the Certificate of Insurance, attached as Exhibit 4.

10. Applicable Law. The laws of the State of West Virginia will govern the rights of the parties under this Agreement.

11. Notices. Notices, letters, and other written correspondence relating to this Agreement must be directed to the respective party as set forth below, or as modified by that party by written notice:

For Newell:

Andrew N. Sawula, Esq.
Schiff Hardin LLP
6600 Sears Tower
Chicago, IL 60606

For Owner:

Lawrence L. Manypenny, Esq.
Manypenny & Carey
106 Court Street
P.O. Box 638
New Cumberland, WV 26047

12. Termination. The access to and right to enter the Property granted to Newell under this Agreement will terminate upon completion of the Work unless extended in writing by Owner.

13. Reservation of Rights. By entering into this Agreement, neither party waives any rights, claims or defenses it may have against the other under the law, nor makes any admission of liability or responsibility.

14. Severability. This writing constitutes the full and entire Agreement of the parties regarding the subject matter of this Agreement. If any paragraph, part, term or provision of this Agreement is construed or held to be void, invalid or unenforceable by order, decree or judgment of a court of competent jurisdiction, the remaining paragraphs, parts, terms or provisions will not be affected and will remain in full force and effect.

15. Headings. The caption headings at the beginning of the paragraphs are inserted only for the convenience of the Parties and for reference purposes. They are not intended to define, limit or have any legal effect.

16. Authority. Each party and signatory to this Agreement represents and warrants to the other party that it has full power, authority and legal rights, and has completed all proceedings and obtained all approvals necessary, to execute, deliver and perform this Agreement.

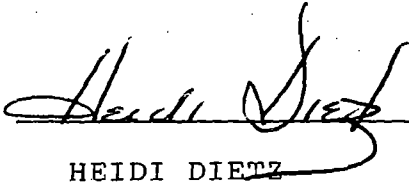
17. Counterparts. This agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart, when so executed, will be deemed to be an original and all such counterparts, when so executed, together will constitute one and the same agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representative as follows:

[Owner]

Newell Holdings Delaware, Inc.

By:


HEIDI DIETZ

By:

Title:

PRESIDENT

Title:

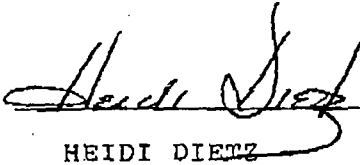
CH2\1201328.1

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representative as follows:

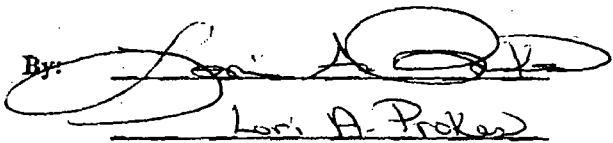
[Owner]

Newell Holdings Delaware, Inc.

By:


HEIDI DIETZ

By:


Lori A. Prokes

Title:

PRESIDENT

Title:

Asst. Corp. Secretary

CH2\1201328.1

11/1/89

505

QUIT CLAIM DEED

THIS DEED made this 1st day of November, 1989,
by and between ROBERT DIETZ and MARIAN DIETZ his wife, and E.
JAN DICARLO and PRIMO DICARLO, her husband, parties of the
first part, Grantors and ROCK SPRINGS ENTERPRISES, INC, a West
Virginia Corporation, 205 California Avenue, Chester, West
Virginia, Grantee, party of the second part.

WITNESSETH: That, for and in consideration of the
sum of One Dollar (\$1.00) and other valuable consideration,
the receipt of which hereby is acknowledged, the Grantors have
remised, released, and forever quitted claim and by these
presents do grant, remise and release and forever QUIT CLAIM
unto the Grantees title and interest in the following described
real estate, to-wit:

PARCEL NO. ONE

ALL those certain lots or parcels of land
situate in the City of Chester, District of
Grant, County of Hancock and State of West
Virginia known as and being Lots Numbers
85, 86 and 87 of the C. A. Smith Addition
Plan of Lots, which plan is of record in the
Office of the Clerk of County Commission of
Hancock County, West Virginia, in Plat Book
No. 1, Pages 35-38.

PARCEL NO. TWO

ALL that certain parcel of land situated
in the City of Chester, Grant District,
Hancock County, West Virginia and being
more fully described as beginning at the
intersection of the West line of Eighth
Street with the North line of the P.C. and
St. L. R. Right of Way and running thence
with said line South 51 degrees 06 minutes
West a distance of 419.82 feet to a point;
thence with said line North 52 degrees 32
minutes 06 seconds West a distance of 20.58
feet to a point; thence with said line
South 51 degrees 06 minutes West a distance
of 58.16 feet the Easterly line of W. S.
Route #30; thence with said line the
following five courses and distances;

1. North 34 degrees 09 minutes 52 seconds
West a distance of 27.16 feet to a
point.
2. North 89 degrees 23 minutes 12 seconds
West a distance of 219.14 feet to a
point.
3. North 34 degrees 09 minutes 52 seconds West
a distance of 146.90 feet to a point.

Now Known as

CH3R (4) 171, 172, and 173
(apartment building across
the street).

Now Known as

(43, 43.1, and 43.2)
(this is the plant
property)

LAWRENCE L. MANYPENNY
ATTORNEY AT LAW

4. North 38 degrees 09 minutes 20 seconds West a distance of 214.62 feet to a point.
5. North 34 degrees 10 minutes 52 seconds West a distance of 249.81 feet to the line of the normal pool of the Ohio River;

thence with said line North 48 degrees 03 minutes 40 Seconds East a distance of 405.97 feet to grantors easterly line; thence with said line South 52 degrees 12 minutes East a distance of 91.92 feet to an angle point in said line; thence continuing with said line North 52 degrees 51 minutes East a distance of 15.53 feet to the East line of Eighth Street; thence with said line South 52 degrees 12 minutes East a distance of 748.11 feet to the place of beginning; Containing in area, 9.5243 acres, more or less, but subject to all legal highways, right of ways, and easements of record.

EXCEPTING AND RESERVING from Parcel No. 2 of deed of conveyance herein:

1. A flowage easement over certain river frontage of lands of Taylor Smith and Taylor Company to United States of America by deed of record in the office of the aforesaid County Commission in Deed Book 111, Page 135.

2. Lease conveyed to Monongahela Power Company a perpetual easement by Lease dated December 23, 1969, in Lease Book No. 14, Page 320.

Being a part of the same property conveyed to Hans F. Dietz by deed from the Anchor Hocking Corporation dated the 16th day of January, 1984 and being of record in the office of the Clerk of the County Commission of Hancock County West Virginia in Deed Book 193 at page 207. Hans F. Dietz having died intestate on the 6th day of May, 1989, leaving as his sole heirs at law the Grantors herein.

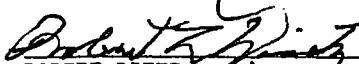
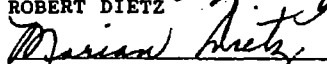
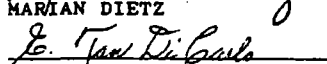

This conveyance is made subject to all restrictions, reservations and exceptions as set forth in prior deeds of record hereto.

The parties of the first part do covenant with the said party of second part that they will WARRANT GENERALLY the property hereby conveyed.

And further the purpose of this deed is to convey all of the interest owned by the Grantors in the real estate

formerly owned by the Anchor Hocking Corporation through its merger with Taylor Smith & Taylor Company. Therefore, the Grantors herein convey by QUITCLAIM deed any property not itemized above and to which the Grantors herein received and own an interest because of and through said merger, and subsequent transfer to Grantors' predecessor in title.

WITNESS the following signatures and seals:

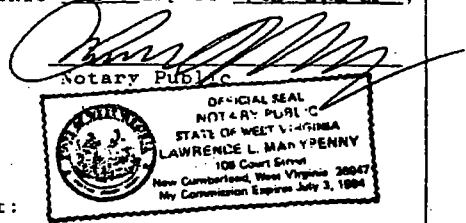

ROBERT DIETZ

MARIAN DIETZ

E. JAN DICARLO

PRIMO DICARLO

State of WVa
County of Hancock to-wit:

I, Lawrence L. Manypenny Notary Public of said County and State, do certify that ROBERT DIETZ and MARIAN DIETZ, his wife, whose names are signed to the writing hereto annexed, bearing date the 15th day of November, 1989, have this day acknowledged the same before me in my said County and State.

Given under my hand this 15th day of November, 1989.

My Commission expires:
July 3, 1994

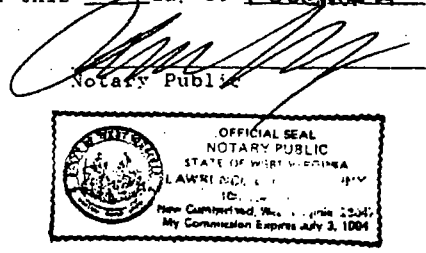


State of WVa
County of Hancock ; to-wit:

I, Lawrence L. Manypenny a Notary Public of said County and State, do certify that E. JAN DICARLO and PRIMO DICARLO, her husband, whose names are signed to the writing hereto annexed, bearing date the 15th day of November, 1989, have this day acknowledged the same before me in my said County and State.

Given under my hand this 22ND day of November, 1989.

My Commission expires:
July 3, 1994



LAWRENCE L. MANYPENNY
ATTORNEY AT LAW

* This is the sub. division
of the plant property —

DB 256
PS. 713

Note date: Feb. 1, 2002
(entered into tax records 2/4/02)

QUITCLAIM DEED

713

THIS DEED made this 01 day of ~~January~~^{February}, 2002, by and between ROCK SPRINGS ENTERPRISES, INC., party of the first part, Grantor and HANS DIETZ APARTMENTS, a Limited Liability Partnership, 205 California Avenue, Chester, West Virginia, 26034, Grantee, party of the second part.

WITNESSETH: That for and in consideration of the sum of One Dollar (\$1.00) and other valuable consideration, the receipt of which hereby is acknowledged, the Grantor has remised, released, and forever quitted claim and by these presents does grant, remise and release and forever QUITCLAIM UNTO THE Grantee all title and interest in the following described real estate, to-wit:

PARCEL ONE

ALL that certain parcel of land situated in the City of Chester, County of Hancock and State of West Virginia, and being more fully described as follows:

BEGINNING at an iron pin, found at the south corner of Lot 174, Plan of Lots laid out by C. A. Smith, as recorded in Plan Book 1, Page 37, said corner being on the northern line of Eighth Street and the Western line of a 16 foot alley;

THENCE South 51 degrees 06 minutes 00 seconds, West 5138 feet to an iron pin, set in the southwest line of Eighth Street, said Eighth Street being a 50 foot right of way as shown on said Plat, but also listed as a 40 foot right of way in the conveyance from Hans F. Dietz to Alicia Arms, a Limited partnership, as recorded in Deed Book 203, Page 304, said iron pin being the true place of beginning of the following described parcel;

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Railroad, now or

THENCE with
degrees 06 minu

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degrees 12 min

outh 52 degrees 12
he northwestern line
hicago & St. Louis
r, West Virginia.

described, South 51
n pin, set;

prises, Inc., North 52
face of a brick wall.

THENCE parallel with said brick wall and through the lands of Rock Springs Enterprises, Inc., North 37 degrees 48 minutes 00 seconds East 27.75 feet to the southwestern line of Eighth Street;

LAWRENCE L. MANYPENNY
ATTORNEY AT LAW

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THENCE with the southwestern line of Eighth Street, South 52 degrees 12 minutes 00 seconds East 456.48 feet to the place of beginning, containing 0.299 acres, more or less. (As shown on Exhibit "A")

It is the intention of Rock Springs Enterprises, Inc., to convey a strip of land parallel to and southwest of Eighth Street and 16.4 feet southwest of the "Office Building" of the former Taylor, Smith and Taylor Pottery, the width of this parcel being 27.75 feet and 0.299 acres, more or less, based on the recorded plat of C. A. Smith subdivision which shows Eighth Street as a 50 foot right of way, or 37.75 feet and 0.408 acres, more or less based on previously recorded deeds for Taylor, Smith and Taylor Pottery which note the right of way of Eighth Street as 40 foot.

BEING part of Parcel No. Two as conveyed to Rock Springs Enterprises, Inc., a West Virginia Corporation by Robert Dietz and Marian Dietz, his wife, and E. Jan DiCarlo and Primo DiCarlo, her husband, on the 1st day of November, 1989, and as recorded in Deed Book 213, Page 505 in the Office of the Clerk of Hancock County, West Virginia.

EXCEPTING and reserving a parcel previously conveyed to Columbia Gas/Mountaineer Gas.

ROCK SPRINGS ENTERPRISES, INC., retains a right of way across the above described parcel for ingress and egress to access the residual of their property.

EXCEPTING and reserving all rights of way, easements, exceptions, reservations, roads and covenants of record.

PARCEL TWO

ALL that certain parcel of land situated in the City of Chester, County of Hancock and State of West Virginia, and being more fully described as follows:

BEGINNING at an iron pin, found at the south corner of Lot 174, Plan of Lots laid out by C. A. Smith, as recorded in Plan Book 1, Page 37, said corner being on the northern line of Eighth Street and the Western line of a 16 foot alley;

THENCE South 51 degrees 06 minutes 00 seconds West 51.38 feet to an iron pin, set in the southwest line of Eighth Street, said Eighth Street being a 50 foot right of way as shown on said Plat, but also listed as a 40 foot right of way in the conveyance from Hans F. Dietz to Alicia Arms, a Limited Partnership, as recorded in Deed Book 203, Page 304;

THENCE with the southwest line of Eighth Street, South 52 degrees 12 minutes 00 seconds East 16.44 feet to an iron pin, set at the northwestern line of the lands now or formerly of the Pittsburgh, Cincinnati, Chicago & St. Louis Railroad, now the lands of the City of Chester West Virginia;

THENCE with the southwest line of the parcel herein described, South 51 degrees 06 minutes 00 seconds West 28.52 feet to an iron pin, set, said iron pin being the true place of beginning of the following described parcel.

Now
Known as

43.2

715

THENCE continuing with the common line of the parcel herein described and the lands now or formerly of the City of Chester, South 51 degrees 06 minutes 00 seconds West 244.37 feet to an iron pin, set;

THENCE through the lands of Rock Springs Enterprises, Inc., North 300.97 feet to an iron pin, set;

THENCE through the lands of Rock Springs Enterprises, Inc., South 52 degrees 12 minutes 00 seconds East 240.69 feet to the place of beginning, containing 0.657 acres, more or less. (As shown on "Exhibit A")

BEING part of Parcel No. Two as conveyed to Rock Springs Enterprises, Inc., a West Virginia Corporation by Robert Dietz and Marian Dietz, his wife, and E. Jan DiCarlo and Primo DiCarlo, her husband, on the 1st day of November, 1989, and as recorded in Deed Book 213, Page 505, in the Office of the Clerk of Hancock County, West Virginia.

EXCEPTING and reserving a parcel previously conveyed to Columbia Gas/Mountaineer Gas.

ROCK SPRINGS ENTERPRISES, INC., retains a right of way across the above described parcel for ingress and egress to access the residual of their property.

EXCEPTING and reserving all rights of way, easements, exceptions, restrictions, reservations, roads, and covenants of record.

WITNESS the following signature and seal.

ROCK SPRINGS ENTERPRISES, INC.

By: *Robert Dietz*
Its: President

State of West Virginia,
County of Hancock, to-wit:

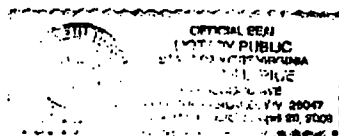
I, *Sharon J. Rice*, a Notary Public of said County and State, do certify that *Robert Dietz*, who signed the above deed for Rock Springs Enterprises, Inc., bearing date the 1st day of February, 2002, has this day acknowledged before me the said writing to be the act and deed of said corporation.

Given under my hand this 1st day of February, 2002.

Sharon J. Rice
Notary Public

My Commission expires:
April 24, 2007

LAWRENCE L. MANTYFENNY
ATTORNEY AT LAW



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DECLARATION OF CONSIDERATION

Under penalties of fine and imprisonment as provided by law, I hereby declare the foregoing conveyance is exempt from the excise tax imposed by Chapter 11, Article 22 of the Code of West Virginia for the following reason: **QUIT CLAIM DEED.**

Address:

Lucy Dietz
205 California Ave.
Charleston, WV 26034

This document prepared by Lawrence L. Manypenny, Attorney at Law, 106 Court Street, PO Box 638, New Cumberland, WV 26047

LAWRENCE L. MANYPENNY
ATTORNEY AT LAW

AR100018

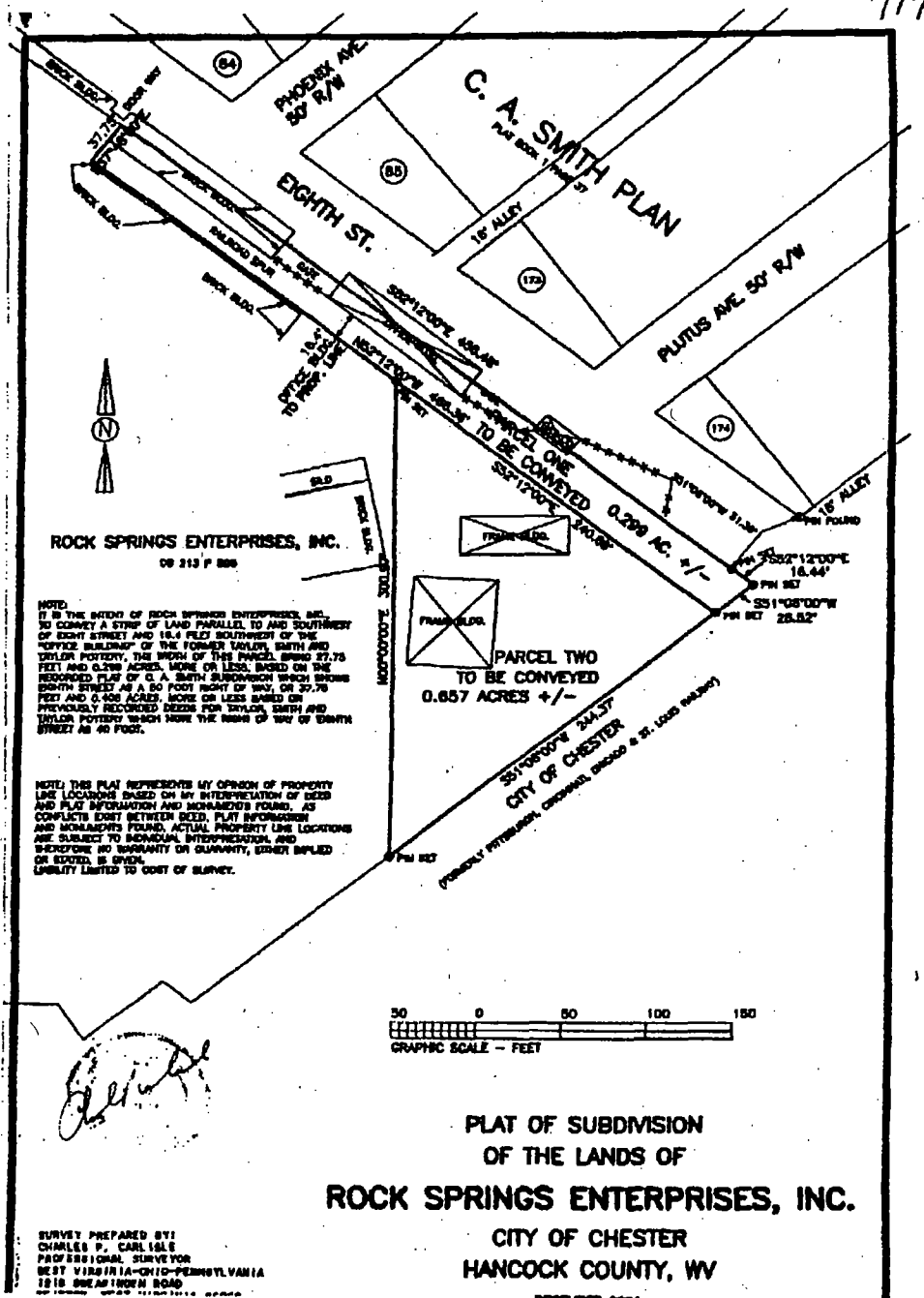


Exhibit "A"

State of West Virginia, County of Hancock, to-wit:
I, Eleanor Straight, Clerk of the County Commission of the County aforesaid, do hereby certify that the foregoing writing dated February 1, 2002, and together with the certificate of acknowledgment thereto, was presented for and by me duly admitted to record on February 4, 2002, at 11:30 A. M.

Eleanor Straight
Eleanor Straight, County Clerk

**BEFORE THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III**

IN THE MATTER OF:

8th and Plutus Streets Pottery Site

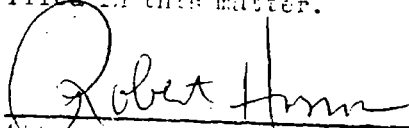
Newell Holdings Delaware, Inc.

Docket No. CERC-03-2004-0255DC

Respondent

Proceeding Under Sections 106(a)
and 122(a) of the Comprehensive
Environmental Response, Compensa-
tion, and Liability Act of 1980,
as amended by the Superfund
Amendments and Reauthorization
Act of 1986, 42 U.S.C. §§ 9606(a)
and 9622(a)

I hereby certify that the
within is a true and correct copy
of the original CONSENT ORDER
filed in this matter.


Attorney for U.S. EPA - REGION III

**ADMINISTRATIVE ORDER BY CONSENT
FOR REMOVAL RESPONSE ACTION**

The parties to this Administrative Order by Consent ("Consent Order" or "Order") Newell Holdings Delaware, Inc. (f/k/a Anchor Hocking Corporation) ("Newell" or "Respondent") and the United States Environmental Protection Agency ("EPA"), having agreed to the entry of this Consent Order, it is therefore Ordered, that:

I. JURISDICTION AND GENERAL PROVISIONS

- 1.1 This Consent Order is issued pursuant to the authority vested in the President of the United States by Sections 106(a) and 122(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 ("CERCLA"), 42 U.S.C. §§ 9606(a) and 9622(a); delegated to the Administrator of EPA by Executive Order No. 12580, 52 Fed. Reg. 2923 (January 29, 1987); further delegated to the Regional Administrators of EPA, and to the Director of the Hazardous Site Cleanup Division, EPA Region III. This Consent Order pertains to property located at 8th Street and Phoenix Avenue, Chester,

Hancock County, West Virginia. The property will hereinafter be referred to as the "8th and Plutus Streets Pottery Site" or "the Site", and is further described in Section III ("Findings of Fact") below.

- 1.2 The Respondent agrees to undertake all actions required by, and comply with all requirements of, this Consent Order (the "Work"), including any modifications hereto.
- 1.3 The Work shall be consistent with the National Oil and Hazardous Substances Pollution Contingency Plan, as amended ("NCP"), 40 C.F.R. Part 300; and CERCLA.
- 1.4 The Respondent consents to and will not contest EPA's authority or jurisdiction to issue or to enforce this Consent Order.

II. STATEMENT OF PURPOSE

- 2.1 In entering into this Consent Order, the mutual objectives of EPA and Respondent are to protect public health, welfare, and the environment by conducting a removal action, as defined in Section 101(23) of CERCLA, 42 U.S.C. § 9601(23), to abate, mitigate and/or eliminate the release or threat of release of hazardous substances at the Site, as hereinafter described, by: (a) excavating and removing all surface soils, sediments, and discarded glazed ceramic shards and other debris mixed in with and/or lying near the ceramic shards (collectively, "ceramic debris"), located at the Site that contain certain hazardous substances; (b) arranging for the proper disposal of all such contaminated surface soils, sediments, and debris; (c) arranging for the proper recycling of glazed ceramic shards; (d) containing and preventing the migration of hazardous substances that will remain in sub-surface soils at the Site after the removal action; and (e) taking measures to ensure that residents living at the Site are not exposed to unsafe levels of such hazardous substances at the Site during and after the removal action.

III. FINDINGS OF FACT

- 3.1 Respondent Newell (f/k/a Anchor Hocking Corporation) is a corporation that was incorporated on or around September 13, 1928 in the State of Delaware. Respondent previously owned and operated a pottery manufacturing facility (the "Facility") at the Site from approximately 1973 to 1982. A legal description of the Facility's former property boundaries is provided in Exhibit A, attached hereto.
- 3.2 Respondent previously manufactured ceramic pottery at the Site. The manufacture of ceramic-based products typically includes the glazing of finished pottery. The glazing process consists of applying colored minerals, mixed with various chemical oxides, to the pottery. This process introduces several materials into the finished product, including metals such as lead, arsenic, antimony, barium, cadmium, cobalt, copper, nickel, and chromium, all of which are hazardous substances. Ceramic debris, containing hazardous

substances, was disposed of at the Site in large piles of broken pottery shards and other debris.

- 3.3 The Site comprises approximately 11 acres and is located at or around 8th Street and Phoenix Avenue in the town of Chester, Hancock County, West Virginia. A map of the Site is attached to this Consent Order as Exhibit B. The Site is at an elevation of approximately 700 feet above mean sea level and is situated in the northern section of the Ohio River flood-plain. The Site includes the Facility and areas located outside the Facility's perimeter fence, where hazardous substances have come to be located, including, but not limited to, sediments of Marks Run, a tributary of the Ohio River, that borders the Site. The Site is bordered to the northeast by residential properties, to the southeast by commercial property and by Marks Run; to the southwest by the Jennings Randolph Bridge and Mark's Run, and to the northwest by the Ohio River. The gradient from the Site to the Ohio River is approximated at over 50%. The majority of the Site is occupied by the Facility. Much of the Facility and its structures are still present. However, vandals have removed most of the electrical wiring, motors, and miscellaneous structural components associated with the kilns and pottery furnaces. According to the current property owner, on-Site silos still contain starting materials associated with pottery making. The materials in the silos, were not sampled during the June 2003 removal assessment (see 3.6 below).
- 3.4 The Facility was owned and operated by three different entities from approximately 1900 to 1982. From approximately 1900 to 1907, the Facility was operated by Taylor, Smith and Lee Pottery. From approximately 1907 to 1971, it was operated by Taylor, Smith and Taylor Company, and, following a merger in or about 1973, by Anchor Hocking from approximately 1973 to 1982. The Facility was permanently closed by Anchor Hocking in early 1982. Anchor Hocking sold the Facility property to Hans F. Dietz in 1984. Mr. Dietz died intestate in May, 1989, his parents, Marian and Robert Dietz, and Jan and Primo DiCarlo inherited the Facility property. The Facility property was subsequently sold to Rock Springs Enterprises, Inc. ("Rock Springs") in November, 1989. Current property records show that the majority of the Site property is owned by Rock Springs, and a small sub-parcel by Hans Dietz Apartments, LP. The former office building located in the southeastern portion of the Site property has been converted into apartments and is currently being used as a residence. Two garage buildings, also located in the southeastern portion of the Site property, were used by Hans Dietz in connection with a barge-cleaning business that he operated at the Site. According to information provided to EPA by counsel for Rock Springs, these buildings were used for a time by an entity who purchased Mr. Dietz's barge-cleaning business after his death, but they are currently not in use. There is an active natural gas well located on the southwestern portion of the Site property. A pipeline from this well runs along the southwestern and southern perimeter of the Site property and toward the area of the Site property where the residences and garages are located. The well and pipeline are owned and operated by G.O.W. Resources.

- 3.5 On or about June, 2003, EPA On-Scene Coordinator ("OSC") Marjorie Easton performed a removal assessment which revealed elevated levels of lead, a listed hazardous substance as defined in Section 101 (14) of CERCLA, 42 U.S.C. § 9601 (14). During the June, 2003 assessment, OSC Easton also discovered that a small area of the Site contained elevated levels of polychlorinated biphenyls ("PCBs"). PCBs are designated as a hazardous substance under Section 102 (a) of CERCLA, 42 U.S.C. § 9602(a), and 40 CFR Part 302.4.
- 3.6 During EPA's June, 2003, assessment, 22 soil or soil/ceramic debris samples and duplicate samples were collected from various locations within the Site boundary. The sample with the highest level of lead was collected near the ceramic debris piles on the western edge of the Site. This sample revealed a lead level of 30,300 parts per million ("ppm"). According to guidance of the Agency for Toxic Substances and Disease Registry ("ATSDR"), the cleanup level guideline for lead for future residential use is 400 ppm. Levels of lead contamination from the other 21 soil samples ranged from a high of 22,300 ppm from a sample collected inside one of the buildings on-Site, to a low of 150 ppm from a sample collected at the eastern edge of the Site.
- 3.7 **Prior Response Actions at the Site**
- (A) On January 27, 1998, the West Virginia Department of Environmental Protection ("WVDEP") investigated the Site at the request of the City of Chester. In late 1998, the WVDEP collected a soil sample from the property. This sample data revealed a lead level of 61,000 parts per million (ppm). This information was forwarded to the U.S. EPA Region III Removal Section.
- (B) On January 21, 1999, EPA OSC Jeff Dodd, WVDEP and the Site Assessment Technical Assistance ("SATA") team conducted a windshield assessment of the property based on the soil sample collected by WVDEP. The representatives observed the area of broken pottery shards and debris on the western side of the Site. The WVDEP stated that two of the buildings on-Site were being leased to several companies for storage. No samples were collected at that time.
- (C) On June 8, 2001, WVDEP, Division of Waste Management, Fairmont District Office conducted another Site reconnaissance and sampling event at the Site. WVDEP collected a total of 18 samples at various locations on the property. Ten of the samples were collected from the ceramic debris piles on the southwestern and southeastern sides of the Site. Analytical results revealed lead concentrations ranging from 688 ppm to 158,000 ppm for these samples. The eight remaining samples were collected inside the buildings on-Site. These were analyzed for total arsenic, barium, cadmium, chromium, selenium and asbestos. At the time, none of these substances (other than lead) proved to be at or above West Virginia state

removal action levels. The WVDEP referred the Site to the EPA primarily due to elevated levels of lead present around the Facility.

- (D) On May 17, 2002, the Superfund Technical Assessment and Response Team ("START"), working to support a Site Inspection assigned by Site Assessment Manager ("SAM") James Hargett, accompanied WVDEP in conducting a windshield assessment and perimeter reconnaissance of the inactive facility. Access gates were open or missing at the time of the visit. On the eastern end of the property, START observed evidence such as children's toys, near the old facility office which is presently being used as a residence. A small portion of the eastern section of the property is used to store empty pressurized tanks and various machinery. This area includes two buildings leased to other companies.

- 3.8 The lead levels in the Site soil samples that were collected by EPA in June, 2003, from the ceramic debris piles near Marks Run, a tributary to the Ohio River, range from a low of 56 ppm to a high of 30,300 ppm. Other data collected by EPA in June, 2003, indicate that lead is present in the sediments of the runoff ditches leading into the Ohio River. Two samples that were collected during the June, 2003, investigation indicated lead levels of 825 ppm and 6,090 ppm from sample locations in ditch or ditch areas where run-off flows directly to the Ohio River. The Ohio River is a major source of drinking water downstream from the Site. It is also a major fishing and recreational waterway for the area. In their health consultation dated August 18, 2003, the Agency for Toxic Substances and Disease Registry ("ATSDR") was concerned not only about the lead levels on Site, but also noted the possibility of PCBs getting into fish in the Ohio River. Currently, the State of West Virginia Department of Health and Human Resources lists a Fish Consumption Advisory for the entire length of the Ohio River based on PCB contamination. One grab sample collected by EPA at the Site during the June, 2003, investigation revealed a level of 21 ppm PCB Aroclor 1260. EPA's PCB Spill Cleanup Policy Rule, 40 CFR § 761.125(c)(4)(v), has established a cleanup guideline of 10 ppm for cleanup of PCBs in soils. A summary of EPA's June, 2003, sampling data, the West Virginia Fish Advisory, and ATSDR's Record of Activity for the August 18, 2003, health consultation are attachments to the Action Memorandum, which is attached hereto as Exhibit C.
- 3.9 Based upon information gathered in connection with the Site, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action may present an imminent and substantial endangerment to public health, welfare, or the environment. Lead and PCBs have various harmful effects to human health and the environment.
- 3.10 Lead and PCBs are listed as hazardous substances at 40 C.F.R. § 302.4.

- 3.11 Based on the information described above, in an Action Memorandum dated March 12, 2004, the Director of the Hazardous Site Cleanup Division for EPA Region III determined that a threat to public health, welfare and/or the environment exists due to the actual or threatened release of hazardous substances from the Site. The Division Director has approved the use of CERCLA funds to mitigate the threats posed at this Site. This approval is provided pursuant to EPA Delegation Number 14-2, which gives the Director of the EPA Region III Hazardous Site Cleanup Division authority to approve CERCLA Removal Actions.

IV. CONCLUSIONS OF LAW

- 4.1 The 8th and Plutus Streets Pottery Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
- 4.2 Respondent Newell Holdings Delaware, Inc. (f/k/a Anchor Hocking Corporation) is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
- 4.3 Lead and polychlorinated biphenyls ("PCBs") are "hazardous substances" within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), because they are listed at 40 C.F.R. § 302.4.
- 4.4 "Hazardous substances," as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), have been disposed of at the Site and are currently present there.
- 4.5 The presence of hazardous substances at the Site and the past, present, and/or potential migration of hazardous substances from the Site constitutes an actual and/or threatened "release" as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).
- 4.6 Respondent is a "person who at the time of disposal of hazardous substance owned or operated any facility at which such hazardous substances were disposed of" within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).
- 4.7 EPA has determined that Respondent is liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

V. DETERMINATIONS

Based on the Findings of Fact and Conclusions of Law set forth above, and upon EPA's review of information for the Administrative Record, EPA has determined that:

- 5.1 The actual and/or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment.

- 5.2 The Work is necessary to protect the public health and welfare and the environment.
- 5.3 Because there is a threat to public health or welfare or the environment, a removal action is appropriate to abate, minimize, stabilize, mitigate or eliminate the release or threat of release of hazardous substances at or from the Site.

VI. PARTIES BOUND

- 6.1 This Consent Order shall apply to and be binding upon EPA and its agents, and upon Respondent and its agents, successors, and assigns. Neither a change in ownership or corporate or partnership status of the Respondent, nor a change in ownership or control of the Site, shall in any way alter Respondent's responsibilities under this Consent Order.
- 6.2 In the event that Respondent files for or is placed into bankruptcy, Respondent shall notify EPA within three days of such event.
- 6.3 The Respondent shall provide a copy of this Consent Order to all contractors, subcontractors, supervisory personnel, laboratories and consultants retained by Respondent to conduct any portion of the Work to be performed by Respondent pursuant to this Consent Order. Respondent shall require in any and all contracts related to this Site that the Work that is the subject of such contract be performed within the time and in the manner set forth in this Consent Order.
- 6.4 The undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms of this Consent Order and to execute and legally bind Respondent to this Consent Order.

VII. NOTICE TO THE STATE

- 7.1 Notice of issuance of this Consent Order has been given to the State of West Virginia pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

VIII. RESPONSE ACTION PLAN DEVELOPMENT AND IMPLEMENTATION

- 8.1 Respondent shall commence and complete performance of the following response action within the time periods specified herein.
- 8.2 Within five (5) business days of the effective date of this Consent Order, Respondent shall notify EPA in writing of the identity and qualifications of the contractor, subcontractor, supervisory personnel, and other persons who will be primarily responsible for developing the Response Action Plan ("RAP") required by this Section. Respondent shall further notify EPA in writing of the identity and qualifications of all contractors,

subcontractors, supervisory personnel and other persons selected by Respondent who will conduct all or any portion of the response action no less than ten (10) business days prior to commencement of the response action to be performed by such persons. Respondent shall ensure that all contractors, subcontractors, supervisory personnel and/or other persons retained to perform the response action shall meet the applicable Occupational Safety and Health Administration ("OSHA") requirements as defined in 29 C.F.R. § 1910.120. The Respondent's selection of all contractors, subcontractors, supervisory personnel and other persons who will perform the response action; the Respondent's Project Coordinator designated pursuant to Section IX; and any replacements to any such persons are subject to disapproval by EPA at any time. In the event of any such disapproval by EPA, Respondent shall notify EPA within ten (10) calendar days of receipt of such EPA disapproval of the person(s) who will replace the one(s) disapproved by EPA. If a person's selection is disapproved by EPA, they shall not perform such specified response action.

8.3 Respondent shall accomplish the following items:

- a. Within forty-five (45) days of the effective date of this Consent Order, in order to prevent exposure to hazardous substances by trespassers at the Facility, restrict public access to the Facility by: installing fencing around the perimeter of the Facility wherever such fencing does not currently exist; repairing any existing damaged perimeter fencing, including, but not limited to, the damaged fencing on the western side of the Facility; and repairing all damaged gates at the Facility;
- b. Within forty-five (45) days of the effective date of this Consent Order, install warning signs and physical boundaries within the Site, including, but not limited to, caution tape, to identify, delineate, and further restrict access to all areas of known surface contamination, including, but not limited to, all ceramic debris;
- c. In addition to the requirements of subparagraphs 8.3(a) and (b) above, install temporary fences and/or other physical barriers to ensure that residents who live at the Facility are protected from exposure to contamination and ongoing work during the performance of the response action;
- d. During the actions described in subparagraph 8.3(g) below, arrange for the temporary relocation of residents living at the Facility, as warranted, so that they are not exposed to unhealthful levels of air-borne lead;
- e. Conduct an extent of contamination study for the Site which will characterize the extent of lead and PCB contaminated soils, sediments and/or debris in both on-property and off-property areas, including the Jennings Randolph Bridge property and the Marks Run tributary. This will include performing a detailed

characterization of the lead contamination on Site using X-Ray Fluorescence technology followed by confirmatory laboratory analyses with appropriate quality control. A guideline of 400 ppm for lead will be used in accordance with ATSDR guidance. In determining the extent of PCB contamination, a guideline of 10 ppm will be used in accordance with the EPA PCB spill cleanup policy rule, 40 CFR § 761.125(c)(4)(v);

- f. Sample for the presence of additional contaminants associated with pottery manufacturing, including, but not limited to, arsenic, antimony, barium, cadmium, cobalt, copper, nickel and chromium, using XRF technology followed by confirmatory laboratory analysis with appropriate quality control. Sample results will be compared to the most current EPA Region III Risk-Based Concentration ("RBC") Table, which assigns health-based benchmarks to various potential contaminants. The most current RBC Table (April 14, 2004) may be found at <http://www.epa.gov/reg3hwmd/risk/human/index.htm>. A copy of the most current RBC Table is attached hereto as Exhibit D. If sample results of any additional contaminants associated with pottery manufacturing, including, but not limited to, arsenic, antimony, barium, cadmium, cobalt, copper, nickel and chromium, prove to be higher than ten times the RBC Table benchmarks, a toxicological review of the data by ATSDR will be conducted in order to establish Site-specific Removal Action Guidelines;
- g. Properly excavate and remove lead-contaminated surface soils, ceramic and other debris that test positive for concentrations of 400 ppm or higher. Excavate and remove PCB contaminated surface soils if they test positive for 10 ppm or higher. Excavate and remove surface soils containing additional contaminants which prove to be present at or above Site-specific Removal Action Guidelines;
- h. Dispose of contaminated soils and non-recyclable ceramic debris off-site in accordance with CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Dispose of or recycle glazed ceramic shards in accordance with CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), 40 C.F.R. § 300.440, including the relevant provisions for disposal or recycling in the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6901 *et seq.*, and the Toxic Substances Control Act, 15 U.S.C. §§ 2601 *et seq.* and its implementing regulations;
- i. Institute engineering controls, as necessary, to ensure that the hillsides on the southwestern and northern boundaries of the Site are stabilized and to control erosion on the southwestern and northern boundaries of the Site. The degree of engineering control implementation at the Site will be contingent upon the three dimensional volume of waste material contamination present at the Site which is yet to be determined. Engineering controls will be used in lieu of excavation

where the depth of contamination exceeds two feet, or if the total amount of contaminated soil at the Site exceeds 5000 cubic yards;

- j. Conduct post-removal sampling to determine whether the levels of lead, PCBs, and other contaminants, as described in subparagraph 8.3(f) above, remaining in soils at the Site, are below the EPA-approved clean up levels after completion of the work described in subparagraph 8.3(g), above;
- k. Restore excavated area to the approximate original conditions by performing site restoration and re-vegetation. Cover areas where contamination was removed with clean soil, coir logs and/or matting, rip rap or other appropriate fill materials to prevent direct contact with soil and/or debris below the surface that may contain lead, PCBs, or additional contaminants associated with pottery manufacturing, at or above Removal Action Guidelines. Restoration activities will be performed in conformance with an approved soil erosion and sedimentation control plan. In areas where lead contamination will remain below the surface, place a demarcation material, such as filter fabric or liner, over the contamination prior to the placement of clean fill to prevent exposure to or unintentional disturbance of these areas;
- l. Dispose of off-Site any contaminated water generated as a result of the above items (e.g. equipment and sampling-related decontamination fluids) by either (1) discharging such water in accordance with substantive National Pollution Discharge Elimination System ("NPDES") requirements into the Ohio River; or (2) removing and disposing of such water off-Site in accordance with applicable law and standards;
- m. Provide site specific health and safety measures, including preparation and implementation of a Health and Safety Plan ("HASP") for actions to be performed at the Site, to protect the health and safety of workers, other personnel and the public from the hazardous substances and work-related health and safety hazards during performance of the response action specified herein. The HASP shall, as appropriate, provide for proper decontamination of personnel and equipment, monitoring and control of off-Site migration of hazardous substances during the performance of activities at the Site and protection of public health from exposure to hazardous substances during the conduct of activities at the Site pursuant to this Consent Order. The HASP shall, as appropriate, provide for a safety assessment of the structural soundness of any on-Site structures that are subject to this Consent Order. Health and safety requirements in the HASP shall be at least as stringent as those set forth in Occupational Safety and Health Administration and EPA requirements, including but not limited to, requirements contained in 29 C.F.R. § 1910.120 and/or EPA Standard Operating Safety Guides (July 5, 1988);

- n. Obtain a Hazardous Waste Generator Identification Number;
 - o. Provide for post-removal Site control activities consistent with Section 300.415 (k) of the NCP, 40 C.F.R. § 300.415 (k); and EPA's "Policy on Management of Post Removal Site Control", (OSWER Directive 9360.2-02 (December 3, 1989)). Such activities shall include, but not be limited to, arrangements with the current Site owner and State or local governments for performance of actions that will ensure the integrity of the work performed at the Site pursuant to this Consent Order through operation and maintenance, actions that will continuously restrict access to the Site, measures that will ensure that any barrier or demarcation material placed over any contamination remaining below the surface of the Site; as provided for in subparagraph 8.3(k) above, is not disturbed, and measures that will ensure continuous review of monitoring data. For purposes of this paragraph, "arrangements with State or local governments for the performance of actions" shall mean submitting, by agreement or otherwise, to enforceable requirements determined by the State or local government to meet the criteria set forth in this paragraph, and shall include public participation and comment as required by the State or local government and the NCP. For purposes of this paragraph, "arrangements with the current Site owner" shall include implementation of institutional controls at the Site that protect the integrity of any barrier placed over any contamination remaining below the surface of the Site, as provided for in subparagraph 8.3(k) above. "Institutional Controls" shall mean non-engineering measures, usually legal controls, intended to limit human activity in such a way as to prevent or reduce exposure to hazardous substances;
 - p. Develop and follow an expeditious schedule for implementation of the RAP.
- 8.4 Within forty five (45) business days of the effective date of this Consent Order, Respondent shall submit to EPA for approval a RAP detailing the response action to be implemented for the items specified in paragraph 8.3 above. To the extent that information concerning the details of a particular item does not yet exist so that it can be described in the RAP, the RAP shall set forth an expeditious schedule and plan for submittal of RAP supplement(s) to EPA for approval, which supplement(s) shall fully detail such items. All references to the review, approval and enforcement of the RAP shall also be applicable to any RAP supplement(s). The RAP shall include, among other things, a schedule for expeditious performance of the response actions required by this Consent Order. The RAP shall be consistent with the NCP and shall be subject to approval by EPA according to the provisions of paragraphs 8.5 and 8.9 below.
- 8.5 EPA will review the RAP and notify the Respondent of EPA's approval or disapproval of the RAP. In the event of disapproval, EPA will specify the deficiencies in writing. The Respondent shall respond to and correct the deficiencies identified by EPA and resubmit the RAP to EPA within thirty (30) business days of receipt of EPA disapproval or such

longer time as may be specified by EPA in its discretion. Exercise of EPA's discretion with respect to such period shall not be subject to the dispute resolution procedures set forth in Section XII of this Consent Order. Approval, disapproval and/or modification by EPA of the subsequent RAP submission shall be according to the provisions of Paragraph 8.9 below.

- 8.6 Within fifteen (15) business days of receipt from EPA of written approval to proceed with implementation of the EPA-approved RAP ("written approval to proceed"), the Respondent shall commence implementation of such RAP and complete it in accordance with the RAP and the schedule therein. In the event EPA determines that any portion of the response action performed is deficient, and EPA requires Respondent to correct or re-perform such portion of the response action pursuant to this Consent Order, Respondent shall correct or re-perform such response action or portion of the response action in accordance with a schedule provided by EPA.
- 8.7 Beginning thirty (30) calendar days subsequent to the date of receipt of EPA approval of the RAP and every thirty (30) calendar days thereafter, or such longer interval as may be determined in writing by the EPA Project Coordinator designated pursuant to Section IX, and until EPA advises Respondent that the Work is complete, the Respondent shall provide EPA with a progress report for each preceding thirty-day period or if applicable, the period specified in writing by the EPA Project Coordinator. The progress reports shall include, at a minimum: 1) a description of the response action completed and the actions that have been taken toward achieving compliance with this Consent Order, including measures to prevent pollution as described in paragraph 8.3(d) above; 2) a description of all data anticipated and activities scheduled for the next 30 calendar days or, if applicable, the period specified in writing by the EPA Project Coordinator; 3) a description of any problems encountered or anticipated; 4) any actions taken to prevent or mitigate such problems; 5) a schedule for completion of such actions; 6) copies of all analytical data received during the reporting period; and 7) all modifications to the response action, RAP and schedule made in accordance with Section XIV of this Consent Order during the reporting period.
- 8.8 Documents, including plans, reports, sampling results and other correspondence to be submitted pursuant to this Consent Order, shall be sent by certified or overnight mail to the EPA Project Coordinator designated pursuant to Section IX.
- 8.9 All reports, plans, approval letters, specifications, schedules and attachments required by this Consent Order are subject to EPA approval and shall be deemed incorporated into this Consent Order upon approval by EPA. In the event that EPA approves a portion of the RAP, report or other item required to be submitted under this Consent Order, the approved portion shall be enforceable under this Consent Order. In the event of conflict between this Consent Order and any document attached hereto, incorporated in or enforceable hereunder, the provisions of this Consent Order shall control. In the event

that EPA disapproves any required submission, EPA will (1) specify the deficiencies in writing, and/or (2) submit its own modifications to the Respondent to accomplish the Work outlined in paragraph 8.3 above. Respondent shall amend and submit to EPA a revised submission that responds to and corrects the specified deficiencies within thirty (30) business days of receipt of EPA disapproval or such longer time as may be specified by EPA in its discretion. Exercise of EPA's discretion with respect to such period shall not be subject to the dispute resolution procedures set forth in Section XII of this Consent Order. In the event that EPA submits its own modifications to the Respondent, the Respondent is hereby required to incorporate such modifications. Any non-compliance with EPA-approved reports, plans, specifications, schedules, attachments, or submission of deficient revisions following EPA disapproval, or non-compliance with an EPA-required modification shall be considered a failure to comply with a requirement of this Consent Order. Determination(s) of non-compliance will be made by EPA.

- 8.10 In addition to the information and documents otherwise required by this Consent Order, Respondent shall provide to EPA, upon written request, any and all information and documents in its possession, custody or control related to the Site including, but not limited to, Site analytical data (including raw data); Site safety data; Site monitoring data; operational logs; copies of all hazardous waste manifests (including copies of all hazardous waste manifests signed upon receipt of the hazardous wastes by a licensed treatment, storage or disposal facility); the identity of treatment, storage and/or disposal facilities used; the identity of transporters used; the identity of any contractors, subcontractors and supervisory personnel used; information and documents concerning Respondent's compliance with Quality Assurance and Quality Control requirements of this Consent Order; information and documents relating to Respondent's efforts to secure access; and information and documents relating to any project delays. Nothing herein shall be interpreted as limiting the inspection and information-gathering authority of EPA under Federal law.
- 8.11 Within sixty (60) calendar days of the date Respondent concludes it has completed implementation of the RAP and the items identified in paragraph 8.3, Respondent shall submit a written Final Report to EPA, subject to EPA approval described in paragraph 8.9 above. The written report shall detail the work undertaken to implement the RAP and the items identified in paragraph 8.3, of this Consent Order, and shall be certified by Respondent in accordance with the terms of Section XXII of this Consent Order. EPA will review the adequacy of Respondent's implementation of the RAP and accomplishment of items specified in paragraph 8.3 above. EPA will notify Respondent, in writing, of any discrepancies in the Final Report or deficiencies in the execution of the RAP and the items identified in paragraph 8.3 and the actions required to correct such discrepancies or deficiencies. Within thirty (30) business days of receipt of notification by EPA, or as otherwise specified by EPA, Respondent shall, as directed by EPA, amend the Final Report, develop an additional plan or amend the existing RAP to address such discrepancies or deficiencies. Any additional plan or amendment to the RAP will be

subject to the approval procedures outlined in paragraphs 8.5 and 8.9 above. Respondent shall perform all actions approved by EPA in a manner consistent with the NCP and all applicable Federal laws and regulations, as required by the NCP.

- 8.12 Respondent shall not handle or remove any hazardous substances from the Site except in conformance with the terms of this Consent Order and all applicable Federal, State and local laws and regulations, as required by the NCP. Any hazardous substance, pollutant or contaminant transferred for disposal off-Site as a result of this Consent Order must be taken to a facility in accordance with 40 C.F.R. § 300.440 and Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3).
- 8.13 Respondent shall not commence any Work except in conformance with the terms of this Consent Order. Respondent shall not commence implementation of the RAP developed hereunder until receiving written EPA approval to proceed pursuant to paragraph 8.6.
- 8.14 Respondent shall immediately notify EPA's Project Coordinator and the National Response Center [(800) 424-8802] and any other party required by law in the event of any action or occurrence during the pendency of this Consent Order which causes or threatens to cause an additional release of hazardous substances, pollutants or contaminants on, at or from the Site, or which may create a danger to public health, welfare or the environment.
- 8.15 In the event that EPA believes that response action or other activities at the Site by the Respondent are causing or may cause a release or potential release of hazardous substances, or are a threat to public health or welfare or to the environment, EPA may, in its discretion, immediately halt or modify such response actions or other activities to eliminate or mitigate such actual or potential releases or threats.

IX. DESIGNATED PROJECT COORDINATORS

- 9.1 Respondent shall designate a Project Coordinator and shall notify EPA of such designation no later than five (5) calendar days after the effective date of this Consent Order. Designation of a Project Coordinator shall not relieve Respondent of its obligation to comply with the requirements of the Consent Order. The Respondent's Project Coordinator shall be a technical and/or managerial representative of the Respondent and may be a contractor and/or consultant; provided, however, the Respondent's Project Coordinator shall not be its legal representative in this matter. The Project Coordinator for EPA designated pursuant to this Section and the Project Coordinator for the Respondent shall be responsible for overseeing the Work. To the maximum extent possible, communications between the Respondent and EPA and all documents concerning the activities performed pursuant to the terms and conditions of this Consent Order, including plans, reports, approvals and other correspondence, shall be directed to the Project Coordinators.

9.2 The Project Coordinator for EPA is:

Dennis Matlock
On-Scene Coordinator
U.S. Environmental Protection Agency
Removal Enforcement Section (3HW32)
401 Methodist Building
Wheeling, West Virginia 26003
(304) 234-0284

- 9.3 Respondent shall have the right to change its Project Coordinator. Such a change shall be accomplished by notifying the EPA Project Coordinator in writing at least five (5) calendar days prior to the change.
- 9.4 EPA shall have the right to change its Project Coordinator at any time without prior notice to Respondent. EPA's intent is to notify the Respondent as soon as practicable following any such change of its Project Coordinator.
- 9.5 The absence of the EPA Project Coordinator from the Site shall not be cause for the stoppage or delay of Work except when such stoppage or delay is specifically required by EPA.
- 9.6 The EPA Project Coordinator shall have the authority to halt or modify Work or other activities performed by Respondent at the Site in order to eliminate a release or threat of release of hazardous substances. Such direction by the EPA Project Coordinator may be given verbally or in writing. If such direction is given verbally, the EPA Project Coordinator will later memorialize such direction in writing.

X. QUALITY ASSURANCE

- 10.1 The Respondent shall use quality assurance, quality control, and chain of custody procedures in accordance with the following documents while conducting all sample collection and analysis activities required by this Consent Order:
- (a) "EPA NEIC Policies and Procedures Manual" (EPA Document 330/9-78-001-R (revised August 1991));
 - (b) "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," (QAMS-005/80 (December 1980)); and
 - (c) "QA/QC Guidance for Removal Activities," (EPA/540/G-90/004 (April 1990)).

- (d) "EPA Guidance for Quality Assurance Project Plans," EPA QA/G-5, (EPA/600/R-98/018, (February 1998));
 - (e) "EPA Requirements for Quality Assurance Project Plans," EPA QA/R5, (EPA/240/B-01/003, (March 2001)); and
 - (f) "Guidance for the Data Quality Objective Process," EPA QA/G4, (EPA/600/R-96/055, (August 2000)).
- 10.2 The Respondent shall consult with EPA in planning for, and prior to, all sampling and analysis required by the approved RAP. The Respondent shall use a laboratory(s) which has a documented Quality Assurance Program that complies with EPA guidance document QAMS-005/80.

XI. ACCESS

- 11.1 As of the effective date of this Consent Order, Respondent shall provide to EPA and its employees, agents, consultants, contractors and other authorized and/or designated representatives, for the purposes of conducting and/or overseeing the Work, access to all property owned or controlled by Respondent wherein Work must be undertaken. Such access shall permit EPA and its employees, agents, consultants, contractors and other authorized and designated representatives to conduct all activities described in paragraph 11.3 of this Consent Order.
- 11.2 To the extent that property wherein Work must be undertaken is presently owned or controlled by parties other than the Respondent, the Respondent shall use its best efforts to obtain Site access agreements from the present owners. Best efforts shall include, but not be limited to, agreement to reasonable conditions for access and/or the payment of reasonable fees. Such access agreements shall be finalized as soon as practicable but no later than thirty (30) calendar days after receiving EPA's written approval to proceed. Such agreements shall provide reasonable access for the Respondent and their employees, agents, consultants, contractors and other authorized and designated representatives to conduct the work, and for EPA and its designated representatives to conduct the activities outlined in paragraph 11.3 below. In the event that any property owner refuses to provide such access or access agreements are not obtained within the time designated above, whichever occurs sooner, the Respondent shall notify EPA at that time, in writing, of all efforts to obtain access and the circumstances of the failure to obtain such access. EPA may then take steps to provide such access. Respondent shall reimburse the United States for all costs incurred in obtaining access which are not inconsistent with the NCP.
- 11.3 In accordance with law and regulation, as appropriate, EPA and its employees, agents, contractors, consultants and other authorized and designated representatives shall have the authority to enter and freely move about the location where the response actions

and/or Work is being performed at all reasonable times for the purposes of, inter alia: inspecting Work, records, operating logs and contracts related to the Site; reviewing the progress of the Respondent in carrying out the terms of this Consent Order; conducting such tests as EPA deems necessary; using a camera, sound recording or other documentary type equipment; and verifying the data submitted to EPA by the Respondent. The Respondent shall permit such persons to inspect and copy all records, files, photographs, documents and other writings, including all sampling and monitoring data, in any way pertaining to the Work.

- 11.4 Respondent may make a claim of business confidentiality for information submitted pursuant to this Consent Order in the manner described in 40 C.F.R. § 2.203(b). Such an assertion shall be adequately substantiated in accordance with 40 C.F.R. § 2.204(e)(4) at the time the assertion is made. Information subject to a confidentiality claim shall be made available to the public by EPA only in accordance with the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such claim of business confidentiality accompanies the information when it is submitted or made available to EPA, the submitted information may be made available to the public by EPA without further notice to Respondent.
- 11.5 Notwithstanding any other provision in this Order to the contrary, except for Paragraph 11.6, the Respondent may withhold records, documents, and any other forms of information covered by any privilege or protection recognized under federal law and applied by federal courts in actions commenced by the United States. In the event that the Respondent withholds a document as privileged, the Respondent shall provide EPA with the title of the document, the date of the document, the name(s) of the author(s) and addressee(s)/recipient(s), a description of the nature of the document and identification of the privilege asserted at the time such document is required to be provided to EPA.
- 11.6 No claim of confidentiality or privilege shall be made regarding any data required to be submitted pursuant to this Consent Order including, but not limited to, sampling, analytical, monitoring, hydrogeologic, scientific, chemical or engineering data, or documents or information evidencing conditions at or around the Site. Nor shall such claims be made for analytical data; Site safety data; Site monitoring data; operational logs; hazardous waste manifests; identities of treatment, storage and/or storage facilities used; identities of transporters used; and/or identities of any contractors or subcontractors used in performing work required by this Consent Order.
- 11.7 Notwithstanding any provision of this Consent Order, EPA retains all of its access and information-gathering authorities and rights under CERCLA and any other applicable statute and regulation.

XII. DISPUTE RESOLUTION

- 12.1 Except as provided elsewhere in this Consent Order, if the Respondent objects to any EPA notification of deficiency, disapproval or other EPA action taken pursuant to this Consent Order, including billings for oversight costs, the Respondent shall notify EPA in writing of its objection(s) within fourteen (14) calendar days of receipt of such notification or action.
- 12.2 EPA and the Respondent shall have fourteen (14) calendar days from the receipt by EPA of the notification of objection to reach agreement. If agreement cannot be reached on any issue within this fourteen (14)-day period, EPA will provide a written statement of its decision to the Respondent. Respondent's obligations under this Consent Order shall not be tolled by submission of any objection for dispute resolution under this Section XII.
- 12.3 In order to prevail in any dispute regarding oversight costs, Respondent must demonstrate that the costs have been calculated incorrectly or have been incurred in a manner inconsistent with the NCP.
- 12.4 Following resolution of the dispute, as provided by this Section XII, Respondent shall perform the Work that was the subject of the dispute in accordance with the agreement reached or EPA's decision. To the extent that Respondent does not prevail upon resolution of any dispute involving contested costs, Respondent shall submit to EPA, within fourteen (14) calendar days of receipt of such resolution, all outstanding oversight costs determined to be owed to EPA, including any accrued interest, as specified in paragraph 13.1 below.
- 12.5 Notwithstanding any other provision of this Consent Order, no action or decision by EPA pursuant to this Consent Order shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XIII. DELAY IN PERFORMANCE AND STIPULATED PENALTIES

- 13.1 For each day, or portion thereof, that Respondent fails to comply with any requirement of this Consent Order at the time and in the manner set forth herein, the Respondent shall be liable upon demand to EPA for the sums set forth below as stipulated penalties. Checks shall be made payable to the "Hazardous Substance Superfund" and shall be transmitted to:

U.S. Environmental Protection Agency, Region III
Attention: Superfund Accounting
P.O. Box 360515
Pittsburgh, PA 15251-6515

Payment shall be made by cashier's or certified check within thirty (30) calendar days of receipt of demand. Interest at the rate of the current annualized treasury bill rate shall begin to accrue on the unpaid balance at the end of the thirty day period pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a). A copy of the transmittal letter shall be sent simultaneously to the EPA Project Coordinator at the address identified in Section IX of this Consent Order and to: EPA Region III Hearing Clerk (3RC00), 1650 Arch Street, Philadelphia, PA 19103.

- 13.2 Stipulated penalties shall accrue in the amount of one thousand dollars (\$1,000) per calendar day per violation. Neither the accrual of nor demand for stipulated penalties set forth in this Section XIII shall preclude EPA from pursuing other penalties or sanctions available to EPA for Respondent's failure to comply with the requirements of this Consent Order.

XIV. FORCE MAJEURE AND NOTIFICATION OF DELAY

- 14.1 The Respondent, through its Project Coordinator, shall notify EPA of any delay or anticipated delay in achieving compliance with any requirement of this Consent Order. Such notification shall be made verbally as soon as possible but not later than two (2) calendar days after Respondent becomes aware or should have become aware of any such delay or anticipated delay, and in writing no later than seven (7) calendar days after Respondent becomes aware, or should have become aware, of such delay or anticipated delay. Such written notification shall be certified by the Project Coordinator in accordance with Section XXII of this Consent Order and shall fully describe the nature of the delay, including how it may affect the Work, RAP and schedule; the actions that will be or have been taken to mitigate, prevent and/or minimize further delay; and the timetable according to which the future actions to mitigate, prevent and/or minimize the delay will be taken. The Respondent shall ensure that its Project Coordinator provides Respondent with immediate notification of any project delays. The Respondent shall adopt all reasonable measures to avoid and minimize such delay.
- 14.2 To the extent Respondent intends to claim that any delay or anticipated delay described by Respondent in accordance with paragraph 14.1 was or will be caused by circumstances beyond its control, Respondent shall, within fourteen (14) calendar days after Respondent becomes aware, or should have become aware, of such delay or anticipated delay, submit to EPA a "Notice of Force Majeure" in which Respondent fully demonstrates that the delay was caused by circumstances beyond its control which could not have been overcome by due diligence, the necessity of the proposed length of the delay, and that the Respondent took and is taking all reasonable measures to avoid and minimize delay. The Respondent shall have the burden of proving these facts to EPA. Any "Notice of Force Majeure" shall be certified by a responsible official of Respondent pursuant to paragraph 22.1(b) of this Consent Order.

- 14.3 Any such delay that EPA determines (1) has resulted or will result from circumstances beyond the control of the Respondent and (2) that could not and cannot be overcome by due diligence on the Respondent's part, shall not be deemed to be a violation of Respondent's obligation(s) under this Consent Order, and shall not subject Respondent to stipulated penalties under this Consent Order for that particular delay. In such event, the schedule affected by the delay shall be extended for a period EPA deems necessary to complete the Work on an expedited basis, but no greater than a period equal to the delay directly resulting from such circumstances. Increased costs of performance of the requirements of this Consent Order or changed economic circumstances shall not be considered circumstances beyond the control of the Respondent. Delay in one item or component of Work or the RAP does not justify delay in timely achievement of other items or components. Each delay must be separately addressed and substantiated according to the provisions of paragraphs 14.1 and 14.2 above, provided, however, that delays arising from the same or related events may be addressed in a single submission.
- 14.4 Failure of the Respondent to comply with the notice requirements of paragraphs 14.1 and 14.2 above shall constitute a waiver of the Respondent's right to invoke the benefits of this Section with respect to that delay.
- 14.5 In the event that EPA and the Respondent cannot agree that any delay in compliance with the requirements of this Consent Order has been or will be caused by circumstances beyond the control of the Respondent that cannot be overcome by due diligence, the dispute shall be resolved in accordance with the provisions of Section XII (Dispute Resolution) of this Consent Order.

XV. RESERVATION OF RIGHTS

- 15.1 Except as expressly provided in this Consent Order, (1) each party reserves all rights, claims, interests and defenses it may otherwise have, and (2) nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Consent Order, including the right to seek injunctive relief and/or the imposition of statutory penalties.
- 15.2 As provided by this Consent Order, EPA expressly reserves its right to disapprove of Work performed by Respondent; to halt Work being performed by Respondent if Respondent has not complied with an approved RAP or this Consent Order, or at any time EPA deems necessary to protect public health, welfare or the environment and to perform such Work; to request and require hereunder that Respondent correct and/or re-perform any and all Work disapproved by EPA; and/or to request or require that Respondent perform response actions in addition to those required by this Consent Order. Further, EPA reserves the right to undertake response action at any time EPA deems appropriate. In the event EPA requires Respondent, and Respondent declines, to correct and/or re-perform work that has been disapproved by EPA and/or to perform response actions in addition to those required by this Consent Order, EPA reserves the right to

undertake such actions and seek reimbursement of the costs incurred and/or to seek any other appropriate relief. In addition, EPA reserves the right to undertake removal and/or remedial actions at any time that such actions are appropriate under the NCP and to seek reimbursement for any costs incurred and/or take any other action authorized by law.

- 15.3 EPA reserves the right to bring an action against the Respondent for recovery of all recoverable costs incurred by the United States related to this Consent Order which are not reimbursed by the Respondent, as well as any other costs incurred by the United States in connection with response actions conducted at the Site.
- 15.4 This Consent Order concerns certain response actions (Work described in Section VIII; above) concerning the Site. Such response actions might not fully address all contamination at the Site. Subsequent response actions which may be deemed necessary by EPA are not addressed by this Consent Order. EPA reserves all rights including, without limitation, the right to institute legal action against Respondent and/or any other parties in connection with the performance of any response actions not addressed by this Consent Order.
- 15.5 Nothing in this Consent Order shall limit the authority of the EPA On-Scene Coordinator as outlined in the NCP and CERCLA.

XVI. OTHER CLAIMS

- 16.1 Nothing in this Consent Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation not bound by this Consent Order for any liability it may have relating in any way to the generation, storage, treatment, handling, transportation, release or disposal of any hazardous substances, hazardous wastes, pollutants or contaminants found at, taken to, or taken from the Site.
- 16.2 This Consent Order does not constitute any decision on preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).
- 16.3 By consenting to the issuance of this Consent Order, the Respondent waives any claim to reimbursement it may have under Sections 106(b), 111 and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611 and 9612.

XVII. OTHER LAWS

- 17.1 All Work shall be undertaken in accordance with the requirements of all applicable and/or relevant and appropriate local, State and Federal laws and regulations, as required by the NCP.

XVIII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

- 18.1 The effective date of this Consent Order shall be the date on which it is signed by EPA.
- 18.2 This Consent Order may be amended by mutual agreement of EPA and the Respondent. Such amendments shall be in writing and shall have as their effective date the date on which such amendments are signed by EPA. Modifications to the EPA-approved RAP and its implementation may be made by mutual agreement of the Project Coordinators. Such modifications shall be memorialized in writing by the Project Coordinators.
- 18.3 Any reports, plans, specifications, schedules, or other submissions required by this Consent Order are, upon approval by EPA, incorporated into this Consent Order. Any non-compliance with such EPA-approved reports, plans, specifications, schedules, or other submissions shall be considered non-compliance with the requirements of this Consent Order and will subject the Respondent to the requirements of Section XIII (Delay in Performance and Stipulated Penalties), above. Determinations of non-compliance will be made by EPA.
- 18.4 No informal advice, guidance, suggestions or comments by EPA regarding reports, plans, specifications, schedules or other submissions by the Respondent or the requirements of this Consent Order will be construed as relieving the Respondent of its obligation to obtain formal approval when required by this Consent Order, and to comply with the requirements of this Consent Order unless formally modified.

XIX. LIABILITY OF THE UNITED STATES GOVERNMENT

- 19.1 Neither the United States Government nor any agency thereof shall be liable for any injuries or damages to persons or property resulting from acts or omissions of Respondent, or of its employees, agents, servants, receivers, successors or assigns, or of any persons including, but not limited to, firms, corporations, subsidiaries, contractors or consultants in carrying out the Work, nor shall the United States Government or any agency thereof be held out as a party to any contract entered into by Respondent in carrying out the Work.

XX. INDEMNIFICATION AND HOLD HARMLESS

- 20.1 Respondent agrees to indemnify and hold harmless the United States, its agencies, departments, agents, officers, employees and representatives from any and all causes of action caused by any acts or omissions of Respondent or its contractors in carrying out the work required by this Consent Order.

XXI. REIMBURSEMENT OF COSTS

- 21.1 EPA shall submit to Respondent periodic and/or a final accounting(s) of oversight costs incurred by the U.S. Government with respect to this Consent Order. Oversight costs shall consist of all costs, including indirect costs, incurred by EPA, its employees, agents, contractors, consultants and other authorized and/or designated representatives in connection with EPA's oversight of the Work.
- 21.2 Respondent shall, within thirty (30) calendar days of receipt of the accounting, remit a check for the amount of those costs made payable to the "Hazardous Substance Superfund." Interest at a rate established pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a) shall begin to accrue on the unpaid balance from the day after the expiration of the thirty-day period notwithstanding any dispute or an objection to any portion of the costs. Checks shall specifically reference the Site and shall be transmitted as specified in Section XIII of this Consent Order.
- 21.3 In the event the Respondent disputes, pursuant to Section XII of this Consent Order, payment of any costs identified in the accounting provided pursuant to Paragraph 21.1, the Respondent shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of West Virginia and remit to that escrow account funds equivalent to the amount of the contested costs. The Respondent shall send to the EPA Project Coordinator a copy of the transmittal letter and check paying the uncontested costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, the Respondent shall initiate the Dispute Resolution procedures in Section XII of this Consent Order. If EPA prevails in the dispute, within 5 days of the resolution of the dispute, the Respondent shall pay the sums due (with accrued interest) to EPA in the manner described in Section XIII of this Consent Order. If the Respondent prevails concerning any aspect of the contested costs, the Respondent shall pay that portion of the costs (plus associated accrued interest) for which it did not prevail to EPA in the manner described in Section XIII of this Consent Order; Respondent shall be disbursed any balance of the escrow account.

XXII. CERTIFICATION OF COMPLIANCE

- 22.1 (a) Unless otherwise required by the terms of this Consent Order, any notice, report, certification, data presentation or other document submitted by Respondent under or pursuant to this Consent Order which discusses, describes, demonstrates or supports any finding or makes any representation concerning Respondent's compliance or non-compliance with any requirement(s) of this Consent Order shall be certified by the Respondent, a responsible official of the Respondent or by

the Project Coordinator for the Respondent. The term "responsible official" means: (i) a president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$35 million (in 1987 dollars when the consumer price index was 345.3), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. The responsible official of a partnership or sole proprietorship means the general partner or the proprietor, respectively.

- (b) The written Final Report required by paragraph 8.11 of this Consent Order, any written notification described in paragraph 12.1 of this Consent Order and any "Notice of Force Majeure" described in paragraph 14.2 of this Consent Order shall be certified by the Respondent or a responsible official of Respondent.

22.2 The certification required by paragraph 22.1 of this Consent Order shall be in the following form:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the Work at the 8th and Plutus Superfund Site, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____
Name (print): _____
Title: _____

- 22.3 Submission of documents pursuant to this Consent Order, which documents Respondent knows or should know contain materially false information, shall constitute a failure to comply with this Consent Order and shall subject Respondent to, among other things, stipulated penalties whether or not a responsible official of Respondent has certified the document.

XXIII. SHIPMENT OF HAZARDOUS SUBSTANCES

- 23.1 Respondent shall, prior to any off-Site shipment of hazardous substances from the Site to an out-of-state waste management facility, provide written notification to the state environmental agency in the receiving state and to EPA's Project Coordinator of such shipment of hazardous substances. However, the notification to EPA of shipments shall not apply to any such off-site shipments when the total volume of all such shipments will not exceed ten (10) cubic yards. Notifications to States in those circumstances shall be governed by applicable state law.
- 23.2 The notification required by paragraph 23.1 shall be in writing and shall include the following information, where available: (1) the name and location of the facility to which the hazardous substances are to be shipped; (2) the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for the shipment of the hazardous substances; and (4) the method of transportation of the hazardous substances. Respondent shall notify the receiving state of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state or to a facility in another state.
- 23.3 The identity of the receiving facility and state will be determined by Respondent. Respondent shall provide all relevant information, including information required by paragraph 23.1, above, relating to the off-site shipments as soon as practicable but no later than one (1) business day before the hazardous substances are actually shipped.

XXIV. RECORD RETENTION

- 24.1 Respondent shall preserve all documents and information relating to the Work performed under this Consent Order, or relating to the hazardous substances found at or released from the Site, for six (6) years following completion of the response action required by this Consent Order. In addition, Respondent shall also retain, as appropriate, monthly reports on analytical services pursuant to OSWER Directive No. 9240.0-2B, "Extending the Tracking of Analytical Services to Potentially Responsible Party-Lead Superfund Sites," (July 6, 1992). At the end of this six year period and thirty (30) days before any document or information is destroyed, Respondent shall notify EPA that such documents and information are available to EPA for inspection, and upon request, shall provide the originals or copies of such documents and information to EPA.

XXV. POST REMOVAL SITE CONTROL

- 25.1 Respondent agrees to maintain the integrity of the response action pursuant to the arrangement proposed in paragraph 8.3 (o), and approved by EPA pursuant to paragraph 8.9, above.

XXVI. DEFINITIONS

- 26.1 "Business days" as used in this Order shall mean every day of the week except Saturdays, Sundays and federal holidays.
- 26.2 "Calendar days" as used in this Order shall mean every day of the week, including Saturdays, Sundays and federal holidays.
- 26.3 "Days" as used herein shall mean "calendar days" unless specified otherwise.
- 26.4 All terms not defined herein shall have the meanings set forth in CERCLA and the NCP.

XXVII. NOTICE OF COMPLETION

- 27.1 When EPA determines, after EPA's review and approval of the Final Report required pursuant to paragraph 8.11 of this Consent Order, that all response action specified in Section VIII of this Consent Order has been fully performed, and upon receipt of costs and penalties assessed by EPA, with the exception of any continuing obligations required by this Consent Order, including those requirements specified in Sections XV ("Reservation of Rights"), XVI ("Other Claims"), XIX ("Liability of the United States"), XX ("Indemnification and Hold Harmless"), XXIV ("Record Retention") and XXV ("Post Removal Site Control"), EPA will provide a notice of completion to the Respondent.

FOR RESPONDENT:



[Signature]

Please Type the Following:

Name: Dale L. Matschullat

Title: Vice-President

Address: Newell Rubbermaid Inc.
10B Glenlake Parkway, Suite 600
Atlanta, GA 30328

8th and Plutus Streets Pottery Site, Chester, Hancock County, West Virginia:

Administrative Order by Consent for Removal Response Action, EPA Docket No. CERC-03-2004-0255DC

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FOR EPA:



ABRAHAM FERDAS

Director, Hazardous Site Cleanup Division
U.S. Environmental Protection Agency
Region III

9/30/04

Date

Attachments: Exhibit A – Legal Description of Former Pottery Manufacturing Facility
Exhibit B – Site Map
Exhibit C – March 12, 2004, Action Memorandum (with attachments)
Exhibit D – EPA Region III Risk-Based Concentration (“RBC”) Table

**EXHIBIT A
(LEGAL DESCRIPTION OF
PROPERTY)**

State of West Virginia, County of Hancock, to-wit:
I, Wilma J. Boring, Clerk of the County Commission of the County aforesaid,
do hereby certify that the foregoing writing dated January 12, 1984
and together with the certificate of acknowledgment thereto, was presented
for and by me duly admitted to record January 24, 1984 at 1:55 PM

Wilma J. Boring
Wilma J. Boring, County Clerk

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THIS DEED, made this 16th day of January, in the year of our
Lord One Thousand Nine Hundred and Eighty-four (1984), by and
between ANCHOR HOCKING CORPORATION as successor by Merger to the
Taylor, Smith and Taylor Company, a Delaware Corporation, party
of the first part, and HANS F. DIETZ, a single person, whose tax
mailing address is 205 California Avenue, Chester, West Virginia,
party of the second part.

WITNESSETH: That for and in consideration of the sum of One
(\$1.00) Dollar and other good and valuable consideration, the
receipt of which is hereby acknowledged, the said party of the
first part doth grant unto the said party of the second part the
following described property, that is to say:

PARCEL NO. ONE:

All those certain lots or parcels of land situate in
the City of Chester, District of Grant, County of Han-
cock and State of West Virginia known as and being Lots
Numbers 85, 86, 87, 165, 166, 167, 168, 169, 170, 171,
172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182,
183, 184, 185, 186 and 187 of the C. A. Smith Addition
to Chester, also known as the South Side Land Company
Plan of Lots, which plan is of record in the Office
of the Clerk of County Commission of Hancock County,
West Virginia in Plat Book No. 1, Pages 35-38.

PARCEL NO. TWO:

All that certain parcel of land situated in the City of
Chester, Grant District, Hancock County, West Virginia
and being more fully described as beginning at the inter-
section of the West line of Eighth Street with the North
line of the P.C. and St. L. R. Right of Way and running
thence with said line South 51° 06' West a distance of
419.82 feet to a point; thence with said line North 52°
32' 06" West a distance of 20.58 feet to a point; thence
with said line South 51° 06' West a distance of 58.16
feet the Easterly line of U.S. Route #30; thence with
said line the following five courses and distances;

1. North 34° 09' 52" West a distance of 27.16 feet
to a point.
2. North 89° 23' 12" West a distance of 219.14
feet to a point.
3. North 34° 09' 52" West a distance of 146.90
feet to a point.
4. North 38° 10' 20" West a distance of 214.62
feet to a point.
5. North 34° 09' 52" West a distance of 249.81
feet to the line of the normal pool of the
Ohio River;

thence with said line North 48° 03' 40" East a distance
of 405.97 feet to grantor's easterly line; thence with
said line South 52° 12' East a distance of 91.92 feet

LAW OFFICES
JORDAN & MANYPENNY

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to an angle point in said line; thence continuing with said line North 52° 51' East a distance of 15.53 feet to the East line of Eighth Street; thence with said line South 52° 12' East a distance of 748.11 feet to the place of beginning; Containing in area, 9.5243 acres, more or less, but subject to all legal highways, right of ways, and easements of record.

EXCEPTING AND RESERVING from Parcel No. 2 of deed of conveyance herein:

1. A flowage easement over certain river frontage of lands of Taylor Smith and Taylor Company to United States of America by deed of record in the office of the afore-said County Commission in Deed Book 111, Page 135.

2. Lease conveyed to Monongahela Power Company a perpetual easement by Lease dated December 23, 1969, in Lease Book No. 14, Page 320.

THE FOLLOWING EXCEPTIONS apply to Parcel No. 1 and Parcel No. 2 of deed of conveyance herein:

1. Deed Book No. 53, Page 118, Deed Book No. 60, Page 89, Lease Record 1, Page 83, Deed Book No. 55, Page 379, Lease Book No. 5, Page 71, Lease Book No. 9, Page 483, Lease Book No. 10, Page 138 are a number of utility right of ways conveyed by C. A. Smith and Taylor Smith and Taylor Company that generally describes the lands over which the right of ways are taken. They could apply to a part or all of anyone of the above described lots or tract.

2. Deed Book No. 176, Page 710, Deed Book No. 158, Page 641 and Deed Book No. 156, Page 657 are three conveyances to the State of West Virginia for road and bridge construction.

3. Any and all right of ways including but not limited to railroad, motor vehicle, utility, sewer and water lines being recorded and unrecorded.

Prior Deed References:

PARCEL NO. ONE:

Lot No. 85 - Deed Book No. 34, Page 104
Lot No. 86 - Deed Book No. 67, Page 80
Lot No. 87 - Deed Book No. 64, Page 388
Lots Nos. 165, 166, 167, 168 and 169 - Deed Book No. 65, Page 430
Lot No. 170 - Deed Book No. 65, Page 429
Lot No. 171 - Deed Book No. 65, Page 224
Lots Nos. 172 and 173 - Deed Book 65, Page 181
Lot No. 174 - Deed Book No. 59, Page 104
Lots Nos. 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185 and 186 - Deed Book 60, Page 433
Lot No. 187 - Deed Book No. 67, Page 111.

PARCEL NO. TWO:

9. 5243 acres, more or less - Deed Book 24, Page 296
Deed Book 60, Page 431

The Grantor herein also refers to the recital of merger of The Taylor Smith and Taylor Company with Anchor Hocking Corp-

oration as found in Article of Incorporation Book No. 19, Page 136 and recorded November 19, 1982.

And the said party of the first part does covenant with the said party of the second part that it will WARRANT GENEALLY the property hereby conveyed.

And further the purpose of this deed is to convey all of the interest owned in the real estate of the Grantor resulting from its merger with The Taylor Smith and Taylor Company. Therefore the Grantor herein conveys by QUIT CLAIM deed any property not itemized above and to which the Grantor herein received and still owns an interest because of and through its merger with the Taylor Smith and Taylor Company.

In Witness Whereof, the said Anchor Hocking Corporation, as successor by Merger to The Taylor, Smith and Taylor Company of Chester, West Virginia, by order of its Board of Directors, hath caused its corporate name to be hereunto subscribed by W. C. Perlow, Jr. its Vice President & Treasurer and its corporate seal to be hereunto affixed this 16 day of January, 1984.

ANCHOR HOCKING CORPORATION, as successor by Merger to The Taylor, Smith and Taylor Company of Chester, West Virginia, a Delaware Corporation

BY W. C. Perlow, Jr.
Its Vice President & Treasurer

Corporate Seal

Acknowledgment-Corporation
State of Ohio
County of Hamilton m to-wit:

I, W. C. Perlow, Jr., a Notary Public of the said County and State, do certify that W. C. Perlow, Jr. who signed the writing above bearing date the 16th day of January, 1984, for Anchor Hocking Corporation, as successor by Merger to the Taylor Smith and Taylor Company, a Delaware Corporation, has this day in my said County, before me, acknowledged the same to be the act and deed of the said Corporation.

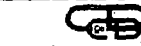
Given under my hand this 17 day of January, 1984.

Notary Seal

My Commission expires: 1985

W. C. Perlow, Jr.
Notary Public

EXHIBIT B
(SITE MAP)



Ecology and Environment, Inc.
 International Specialists in the Environment
 START Team - EPA Region 3
 Wheeling, West Virginia
 TDD No. SW3-02-07-0016
 JOB No. 001262.0278.0151
 EPA/START Contract No. 68-S3-00-01

8TH AND PLUTUS STREETS POTTERY SITE REMOVAL SAMPLE LOCATION MAP



Map By: W/FH
 Date Modified: 9/02/2004
 Scale: 1:2,179



SOURCE:

Base map provided from Hancock County Assessors Office
 Superimposed on map based on GPS reference points
 of a 1/4 mile grid. GPS unit, photographs, and documentation.

NOTE:

Due to limited cell coverage and uneven topography
 some displayed sample locations were adjusted using a
 combination of GPS unit, photographs, and documentation.

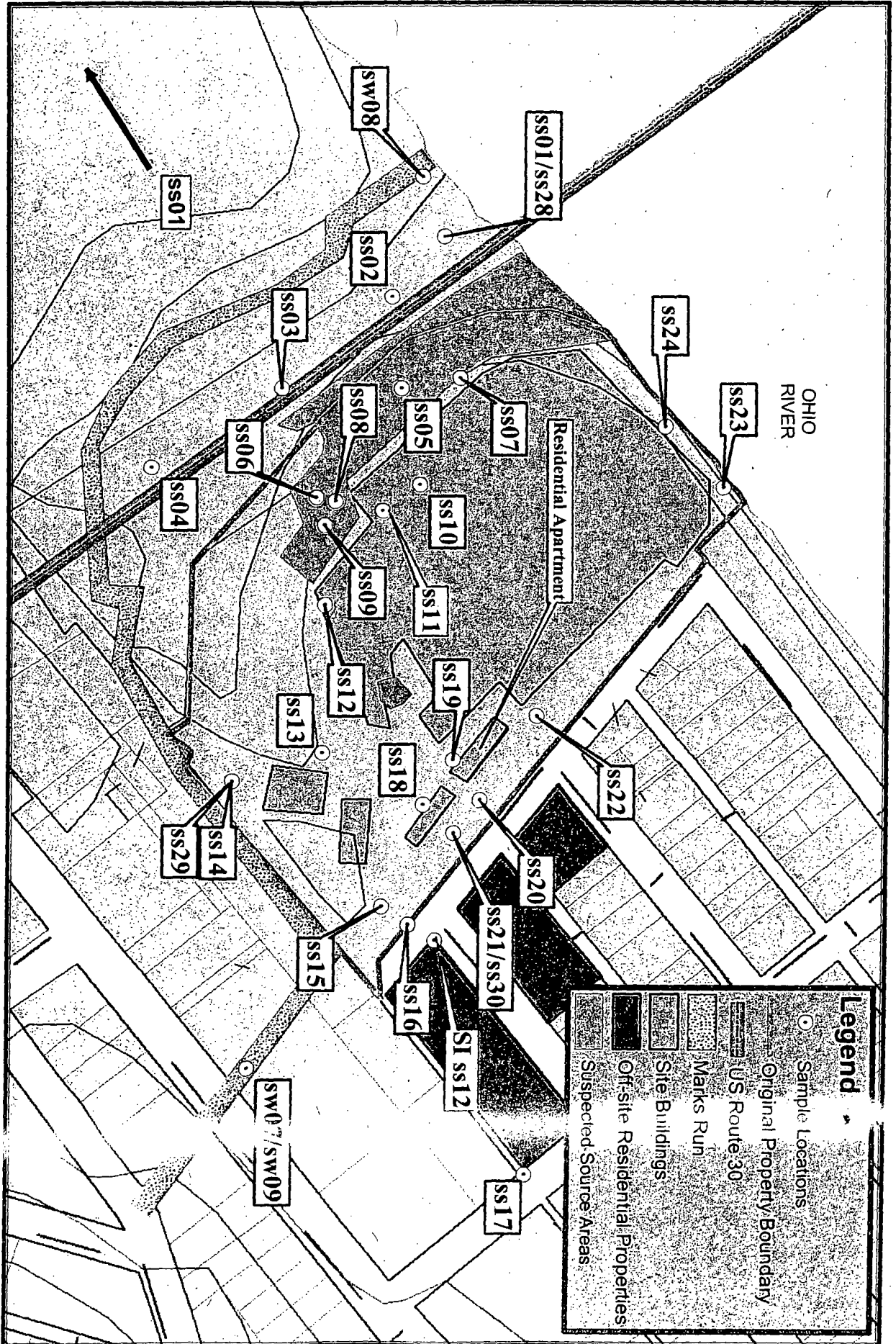


EXHIBIT C
(ACTION MEMO +
ATTACHMENTS)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, PA 19103-2029

MAR 12 2004

SUBJECT: Request for a Removal Action
8th and Plutus Streets Pottery Site
8th Street and Phoenix Avenue
Chester, Hancock County, West Virginia
40° 37' 3.76" North 80° 33' 30.73" West

FROM: *Marjorie Easton*
Marjorie Easton, On-Scene Coordinator (OSC)
Removal Response Section (3HS31)

TO: Abraham Ferdas, Director
Hazardous Site Cleanup Division (3HS00)

I. PURPOSE

This Action Memorandum is to request funds for a Time Critical Removal Action, pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9601 et seq., as amended, at the 8th and Plutus Streets Pottery Site ("Site") in Chester, Hancock County, West Virginia. An assessment performed at the Site in June, 2003 revealed conditions that meet the criteria for a Removal Action set forth in 40 CFR Part 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"). The results of the June, 2003 site assessment showed elevated levels of lead and the presence of polychlorinated biphenyls ("PCBs"), both CERCLA listed hazardous substances, in Site soils and are further described in Section III of this Action Memorandum. As a result of Site conditions, an immediate Removal Action under CERCLA is required to mitigate a release or threat of release of hazardous substances at the Site. The work will be performed by the Environmental Protection Agency ("EPA") pursuant to CERCLA and the NCP. The Removal Action is anticipated to require less than \$2,000,000 and less than 12 months to complete.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical Location

The Site is located at 8th Street and Phoenix Avenue in the town of Chester, Hancock County, West Virginia. The Site is at an elevation of approximately 700 feet above mean sea level. The Site is situated in the northern section of the Ohio River flood-plain. The Site is the location of a large defunct pottery manufacturing facility and includes areas located outside the facility's perimeter fence. The Site is bordered to the northeast by residential properties, including the Alicia Arms Apartments and Hans Dietz Apartments, to the southeast by commercial property and by Marks Run, a tributary to the Ohio River, to the southwest by the Jennings Randolph Bridge,

and to the northwest by the Ohio River. The gradient from the Site to the Ohio River is approximated at over 50%.

2. Site History

Approximately 11 acres of the Site was a pottery manufacturing facility that was owned and operated from 1900 to 1982 by three different entities. From 1900 to 1907, the facility was operated by Taylor, Smith and Lee Pottery. From 1907 to 1971, it was operated by Taylor, Smith and Taylor Company and, following a merger in 1971, by Anchor Hocking Corporation ("Anchor Hocking") from 1971 to 1982. The facility was permanently closed by Anchor Hocking in early 1982. Anchor Hocking sold the property to Hans Dietz in 1984. Mr. Dietz died in May of 1989, and willed the property to his parents, Marian and Robert Dietz, and to Jan and Primo Dicarlo. The property was subsequently sold to Rock Spring Enterprises, Inc. in November of 1989. Currently, property records show that the majority of the property is owned by Rock Spring Enterprises, Inc., and a small sub-parcel by Hans Dietz Apartments, LP.

The prior manufacturing operations at the Site included the basic steps in the manufacture of ceramic-based products, mostly ceramic dinnerware. Some of the starting materials used included ball clay, fire clay, slip clay, flint, talcum and feldspar. None of these products are listed as hazardous substances. However, one of the steps involved in pottery manufacturing was the glazing of the finished pottery. This glazing process consisted of applying colored minerals mixed with various chemical oxides to the pottery. This process introduced several materials into the finished product, which included metals such as lead, arsenic, antimony, barium, cadmium, cobalt, copper, nickel and chromium. The glaze was used to coat the pottery prior to it being fired at a high temperature. Some of the metals listed above are identified as hazardous substances (e.g., lead and arsenic).

3. Site Characteristics

The majority of the Site is occupied by the defunct pottery manufacturing facility. Practically all of the original facility and its structures are still intact. Vandals have removed most of the electrical wiring, motors, and miscellaneous structural components associated with the kilns and pottery furnaces. According to the property owners, the silos still contain starting materials associated with pottery making. The materials in the silos, which based on available information are believed to be non-hazardous starting materials, were not sampled during the June, 2003 removal assessment. This assumption will be verified during the removal phase. There are two modern warehouses on the Site, as well as an office building. The office building is currently rented and occupied as a residence. Near the center of the property, there are several electric transformers that are staged directly on the ground. Trace amounts of PCBs were found in soils in the vicinity of the transformers, however, the highest concentration during the sampling event came from a sample collected at location SS-23, which is located along the northeastern riverside boundary of the site. The Site also has an abandoned gas well located on the southeast side. The abandoned well is located next to a ceramic debris pile. The Site is served with electricity and the local municipal public water service. Although parts of the Site are fenced, most of the Site is readily accessible to trespassers, and the fence is easily breached. Besides the vandalism mentioned above, evidence of human trespass includes graffiti on buildings and other structures. Photos document the presence of graffiti on the inside and outside of the facility. At the Jennings

Randolf Bridge located on the southwestern side of the Site, and across from a breach in the Site's fence, graffiti was also observed. A tear in the Site fence was observed near the bridge.

4. Release or Threat of Release of a Hazardous Substance, Pollutant or Contaminant

A removal assessment performed by On-Scene Coordinator ("OSC") Marjorie Easton in June, 2003, revealed elevated levels of lead, a listed hazardous substance as defined in Section 101 (14) of CERCLA, 42 U.S.C. § 9601 (14). During the June assessment, 22 soil samples, plus the required duplicate samples, were collected from various locations within the Site boundary. The sample with the highest amount of lead was sample number SS05 collected near the ceramic waste piles on the western edge of the Site. This sample revealed a lead level of 30,300 ppm. Levels of lead contamination from the other 21 soil samples ranged from a high of 22,300 ppm from a sample collected inside one of the buildings on-site, to a low of 150 ppm from a sample collected at the eastern edge of the Site. Based on sampling of the pottery waste in June, 2003, it was determined that one of the main contributors of the lead contamination present at this site is from the deposits of pottery shards and glazed materials located within the debris piles throughout the site. Due to the lack of homogeneity of the piles and lack of knowledge of the exact depth of the piles, the cubic yardage of the contaminated lead piles has not yet been determined. Since the site is easily accessed by breaching the fence or entering the Site where the fence is missing, the contamination may be spread by trespassers. The office building located on the northwest portion of the Site is being used as a residence, and people living in the building may come into direct exposure with the contaminated soils or debris piles. This may occur if trespassers walk through areas of site where the contaminated piles are uncovered and exposed to the elements.

Also discovered during the sampling assessment was a small area containing elevated levels of Polychlorinated biphenyls. PCBs are toxic and persistent. PCBs can enter the body through the lungs, gastrointestinal tract, and skin, and can circulate throughout the body and can be stored in the fatty tissue. PCBs may cause reproductive effect and developmental toxicity to humans. In addition, PCBs are absorbed and stored in the fatty tissue of higher organisms as they bioaccumulate up the food chain through invertebrates, fish, and mammals. This ultimately results in human exposure through consumption of PCB-containing food sources. While some of the PCB contamination on the interior of the Site may be from abandoned transformers, the highest concentration of PCBs was discovered at sample number SS23 along the northeast corner on the bank of the Ohio River. The level of PCBs at this location was 21 ppm. The source of this PCB contamination is unknown. PCBs are designated as a hazardous substance under Section 102 (a) of CERCLA and 40 CFR Part 302.4. While the areas which contained PCBs are heavily overgrown with vegetation, humans or animals may come in contact with PCBs at the Site.

5. National Priority List Status

The Site is not on the National Priorities List ("NPL"), nor is the Site proposed for the NPL. Based upon the sampling performed by the EPA during the removal assessment, the completion of actions proposed in this Action Memorandum should prevent any further spread of contamination and exposure to public health.

6. Maps, Pictures, and Other Graphic Representation

A general Site Location Map and a Sample Location Map of the soils and contaminants of concern are included as Attachment 2. Photographs of the Site are included as Attachment 3.

B. Other Actions to Date

1. Previous Actions

On January 27, 1998, the West Virginia Department of the Environmental Protection ("WVDEP") investigated the site as requested by the City of Chester. In late 1998, the WVDEP collected a soil sample from the property. This sample data revealed a lead level of 61,000 parts per million (ppm). This information was forwarded to the U. S. EPA Region III Removal Section.

On January 21, 1999, EPA OSC Jeff Dodd, WVDEP and Site Assessment Technical Assistance ("SATA") team conducted a windshield assessment of the property based on the soil sample collected by WVDEP. The representatives observed the area of broken pottery shards and debris on the western side of the site. WVDEP stated that two of the buildings on site were being leased to companies for storage. No samples were collected at that time.

On June 8, 2001, WVDEP, Division of Waste Management, Fairmont District Office conducted another Site reconnaissance and sampling event at the Site. WVDEP obtained permission from Mr. Robert Dietz, a representative of Rock Spring Enterprises, Inc., which was thought be the sole owner of the pottery facility by WVDEP. The WVDEP collected a total of 18 samples at various locations on the property. Ten of the samples were collected from the waste ceramic debris piles on the southwestern and southeastern sides of the Site. Analytical results revealed lead concentrations ranging from 688 ppm to 158,000 ppm for these samples. The eight remaining samples were collected inside the buildings on site. These were analyzed for total arsenic, barium, cadmium, chromium, selenium and asbestos. At the time, none of these substances (other than lead) proved to be at or above West Virginia state removal action levels. Asbestos was found in pipe insulation collected inside the building. The WVDEP referred the Site to the EPA primarily due to the elevated levels of lead present around the facility.

On May 17, 2002, the Superfund Technical Assessment and Response Team ("START"), working to support a Site Inspection assigned by Site Assessment Manager ("SAM") James Hargett, accompanied the WVDEP in conducting a windshield assessment and perimeter reconnaissance of the inactive facility. Access gates were open or missing at the time of the visit. On the eastern end of the property, START observed evidence such as children's toys, near the old facility office which is presently being used as a residence. A small portion of the eastern section of the property is used to store empty pressurized tanks and various machinery. This area includes two buildings leased to other companies.

Following the assessment, START informed SAM Hargett of the findings. SAM Hargett informed OSC Marjorie Easton, who had been assigned to replace OSC Jeff Dodd. OSC Easton determined that additional sampling was required.

C. State and Local Authorities' Roles

The WVDEP has played a very active role in connection with the Site. The WVDEP performed the first two sampling assessments that identified the presence of hazardous substances on the Site, and WVDEP inspectors have been present at subsequent assessments. The WVDEP provided the OSC with results of the assessments. On subsequent EPA assessments of the Site, the WVDEP was on-site and assisted with background information.

The WVDEP informed EPA that they do not have the financial resources available at this time to perform an environmental cleanup.

The Mayor of Chester, Mr. Ken Morris, also contacted the EPA via e-mail and telephone as well as the West Virginia Governor's Office concerning the Site. The City of Chester lacks the funding available to mitigate the threat of release of hazardous substances from this site. Mr. Morris has expressed concern that the site is easily accessible to local youth.

The EPA OSC will continue to update the state and local community concerning any actions at the Site. They will be included in all planning regarding the actions EPA may take at the Site that may include health and safety matters related to the Site.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Part 300.415 of the National Oil and Hazardous Substances Contingency Plan ("NCP") lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b) (2), (i), (ii), (iv), (v), and (vii) of Part 300.415 directly apply as follows to conditions as they exist at the 8th and Plutus Streets Pottery Site.

Part 300.415(b)(2)(I) *"Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants"*

Lead is the major contaminant of concern that has been identified at this location. However, a grab sample of soil also identified some PCB contamination. The Site is located in a residential area of Chester, WV, and borders the Ohio River. Based on the current conditions at the Site and the results of the analytical data, there exists a threat to public health and the environment. The analytical results have indicated that lead in the Site soils exists in amounts detrimental to human population and to the environment. One building located on-site is being used as a residence. There is a school located less than 1200 feet from the ceramic debris pile where the lead contamination has been identified. There is evidence of trespassers in the form of graffiti on buildings on the Site. While a fence exists around some portions of the Site, access is not restricted. On various occasions, during windshield assessments by WVDEP and EPA, gates have been found to be either missing or open. Numerous runoff ditches are present on the northern portion of the site. These flow into the Ohio River and could potentially contaminate the food chain. Lead from runoff poses a serious threat to the aquatic food chain.

Part 300.415(b)(2)(ii) *"Actual or potential contamination of drinking water supplies or sensitive ecosystems."*

There are no residential wells in the immediate area of the Site. However, recent data indicates lead is present in the sediments of the runoff ditches leading into the Ohio River. The Ohio River is a major source of drinking water downstream from the Site. It is also a major fishing and recreational waterway for the area. In their health consultation dated August 18, 2003 (Attachment 4), the Agency for Toxic Substances and Disease Registry ("ATSDR") was concerned not only about the lead levels on Site, but also about the possibility of Lead and PCBs getting into fish in the Ohio River. Currently, the State of West Virginia Department of Health and Human Resources lists a Fish Consumption Advisory (Attachment 5) for the entire length of the Ohio River based on PCB Contamination. One grab sample of PCB on the Site revealed a level of 21 ppm PCB Aroclor 1260.

Site contaminants present the threat of migration into the waterways during precipitation and storm events. The lead levels in the Site soils on the ceramic debris piles near Marks Run, a tributary to the Ohio River, range from a low of 56 ppm to a high of 30,300 ppm.

Part 300.415(b)(2)(iv) *"High levels of hazardous substances or pollutant or contaminants in soils largely at or near the surface, that may migrate."*

Analytical results from the June, 2003 sampling event revealed high levels of lead, up to 30,300 ppm in the surface soils adjacent to the ceramic debris piles on site. Some of the areas on the Site are vegetated. However, the areas in which the ceramic piles are located are not vegetated. Heavy rain presents the threat of migration for this pollutant to the nearby Marks Run and thus the Ohio River. Numerous runoff ditches were observed by the OSC during the June, 2003 sampling event.

Part 300.415(b)(2)(v) *"Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released"*

Many of the ceramic debris piles are fully exposed to the open atmosphere therefore allowing precipitation to contact them directly. The gradient from the Site to the Ohio River is approximated at over 50%. Precipitation that contacts the piles drains to both Marks Run and, in some areas, directly to the Ohio River.

Part 300.415(b)(2)(vii) *"The availability of other appropriate federal or state response mechanisms to respond to the release."*

The WVDEP has requested that the EPA take the necessary actions to mitigate the threats posed by the release and threat of release of hazardous substances at the Site. The WVDEP does not currently possess the financial resources to perform a cleanup at this time.

IV. ENDANGERMENT DETERMINATION

Based upon information gathered in connection with the Site, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment. As such, the proposed response action set forth in this action memorandum should be implemented to abate the threats presented.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action

1. Proposed Action Description

The Removal Action proposed for the Site is designed to mitigate the imminent and substantial threat posed to the public health, welfare, and the environment by removing and or stabilizing the lead contaminated soils, sediments, and debris on Site and in the adjacent creek bed. It will also determine the extent of the PCB contamination and either stabilize or remove it from the Site. Unless otherwise specified by ATSDR, cleanup actions will be performed where lead is found in concentrations above 400 ppm. This number was selected to be protective of human health and the ecological health of the creek and river.

The proposed Removal Actions listed below describe removal actions that need to be conducted. The actions proposed for this Action Memorandum are as follows:

- I. Mobilize environmental cleanup contract personnel and technical assistance personnel to the Site. Mobilize cleanup equipment as determined by the OSC to include equipment suitable for removing and staging contaminated soils.
- II. Restrict access to the Site by repairing the damaged fence on the western side of the site, and by repairing the damaged gates on all portions of the Site. Following a thorough characterization, implement warning signs and physical boundaries such as caution tape and/or fencing to delineate and restrict access to all areas of surface contamination, both on-property and off-property through the actions listed below.
- III. Determine, through sampling, the extent of lead and PCB contaminated soils, sediments and/or debris in both on-property and off-property areas, including the Jennings Randolph Bridge property and the Marks Run tributary. This will include performing a detailed characterization of the lead contamination on Site using X-Ray Fluorescence technology followed by confirmatory laboratory analyses with appropriate quality control. A guideline of 400 ppm lead will be used in accordance with ATSDR guidance.

Determine the extent of PCB contamination by on-site field PCB test kits followed by confirmatory laboratory analyses with appropriate quality control. A guideline of 10 ppm will be used in accordance with the EPA PCB spill cleanup policy rule 40 CFR §761.125(c)(4)(v).

Sample for the presence of additional contaminants associated with pottery manufacturing using EPA approved laboratory analyses. Sample results will be compared to current Removal Action Guidelines. Removal Action Guidelines include the use of Emergency Removal Guidelines ("ERGs"), which are generated from the EPA Region III Risk-based Concentration Table, which assigns health based benchmarks to various potential contaminants.

- IV. Excavate and remove lead contaminated surface soils and debris that test positive for concentrations of 400 ppm or higher. Excavate and remove PCB contaminated surface soils if they test positive for 10 ppm PCB or higher. Excavate and remove surface soils containing additional contaminants which prove to be present at or above Removal Action Guidelines. Excavation will be conducted to a maximum depth no greater than two feet below the native ground surface.
- V. Stage, remove and dispose of contaminated soils off-site in accordance with CERCLA Section 121(d)(3).
- VI. Institute engineering controls to ensure that the hillside on the southwestern and northern boundaries of the Site are stabilized and to prevent erosion on the southwestern and northern boundaries of the Site. The degree of engineering control implementation will be contingent upon the three dimensional volume of waste material contamination present which is yet to be determined. Engineering controls will be used in lieu of excavation where the depth of contamination exceeds two feet, or if the total amount of contaminated soil exceeds 5000 cubic yards. Implement Post-Removal Site Controls and institutional controls to prevent future disturbance, such as excavation, of areas where contamination remains at depths greater than two feet below the native ground surface.
- VII. Following removal and off-site disposal of contamination, cover areas where contamination was removed with clean soil, coir logs and /or matting, rip rap or other appropriate fill materials. The cover will be used to prevent direct contact with soil and/or debris below the surface that may contain lead, PCBs, or additional contaminants associated with pottery manufacturing, at or above Removal Action Guidelines. In areas where lead contamination will remain below the surface, place a barrier, such as filter fabric or liner, over the contamination prior to the placement of clean fill to prevent exposure to these areas.
- VIII. Re-vegetate affected areas with appropriate indigenous plants and/or seeds. Restore the surface features to pre-existing conditions as appropriate.
- IX. Demobilize equipment.

2. Contribution to Remedial Performance

The actions proposed herein are consistent with accepted removal practices. These actions are expected to abate the threats that meet the NCP removal criteria. The actions proposed are consistent with any long term or remedial action that might be necessary at the Site.

3. Compliance with Applicable and Relevant and Appropriate Requirements (ARARs)

The proposed Removal Action set forth in this Memorandum will comply with applicable or relevant and appropriate environmental and health requirements, to the extent practicable, considering the exigencies of the situation. On August 18, 2003, the OSC contacted the WVDEP

Division of Waste Management via telephone and letter. The OSC informed the WVDEP that a removal action was planned for the 8th and Plutus Streets Pottery Site and requested that the WVDEP identify the ARARs and subsequently supply them to the OSC. The OSC has followed up with a second letter dated January 23rd, 2004, requesting that the State ARARS be identified by January 27, 2004. In a subsequent phone call to the WVDEP Chief of Compliance, the Chief confirmed that he would supply the requested information. These should be forthcoming in the near future. The OSC will continue to work with the WVDEP to identify those ARARs that do apply to this action and will comply with them to the extent practicable.

This proposed Action Memo complies with the EPA Toxic Substance and Control Act (TSCA) PCB spill cleanup policy rule 40 CFR Part 761. Based on a standard health consultation with the Agency for Toxic Substances and Disease Registry (ATSDR) in coordination with the West Virginia Department of Health and Human Resources (WVDHHR), a lead guideline of 400 ppm will be implemented.

B. Estimated Costs

Extramural Costs	
Regional Removal Allowance Costs	\$690,000
10% Contingency	69,000

Other Extramural Costs Not Funded From the Regional Allowance	
Total START	\$195,000
Total Contract Lab Program (CLP)	15,000

Total Extramural

TOTAL ESTIMATED PROJECT CEILING	\$969,000
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VI. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED

If the actions described in this Action Memorandum are not conducted, there would be a continuing potential threat to human health and the environment. Lead, which is a hazardous substance, will continue to be exposed on the surface of the Site. PCBs, another hazardous substance, while not anticipated to exist in large quantities at the Site, will also be exposed. Substantial release of hazardous substances into the environment may occur. These potential releases pose a significant threat to the human population of the area and a threat to the waters of the Marks Run and the Ohio River.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues related to the proposed Removal Actions at this Site.

VIII. ENFORCEMENT STATUS

The OSC has provided the Removal Enforcement Section with information relative to the Site. Currently, there are no known potentially responsible parties ("PRP") for the Site capable of

implementing this action. The total EPA costs for this Removal Action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$1,548,649.80. This total amount is the sum of direct and indirect costs. Indirect costs are calculated as a proportion of direct costs. See the Attached Confidential Enforcement Addendum (Attachment 6).

IX. RECOMMENDATION

This decision document represents the proposed Removal Action for the 8th and Plutus Streets Pottery Site located in Chester, Hancock County, West Virginia, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP.

Because conditions at the Site meet criteria for a Removal Action as set forth in Section 300.415(b)(2) of the NCP, I recommend your approval of this Request for a Removal Action. The total estimated Project Ceiling, if approved, will be \$969,000.¹

APPROVED *Cheryl Fend*
Director
Hazardous Site Cleanup Division

DATE 3/11/04

DISAPPROVED _____
Director
Hazardous Site Cleanup Division

DATE _____

Attachments:

1. Site Location Maps
2. Site Sampling Maps with Site Sampling Data
3. Site Photos
4. ATSDR Health Consultation
5. WVDHHR WV Fish Consumption Advisory for the Ohio River
6. Confidential Enforcement Addendum

¹ Direct Costs include direct extramural costs and direct intramural costs. Indirect Costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

ATTACHMENT 1

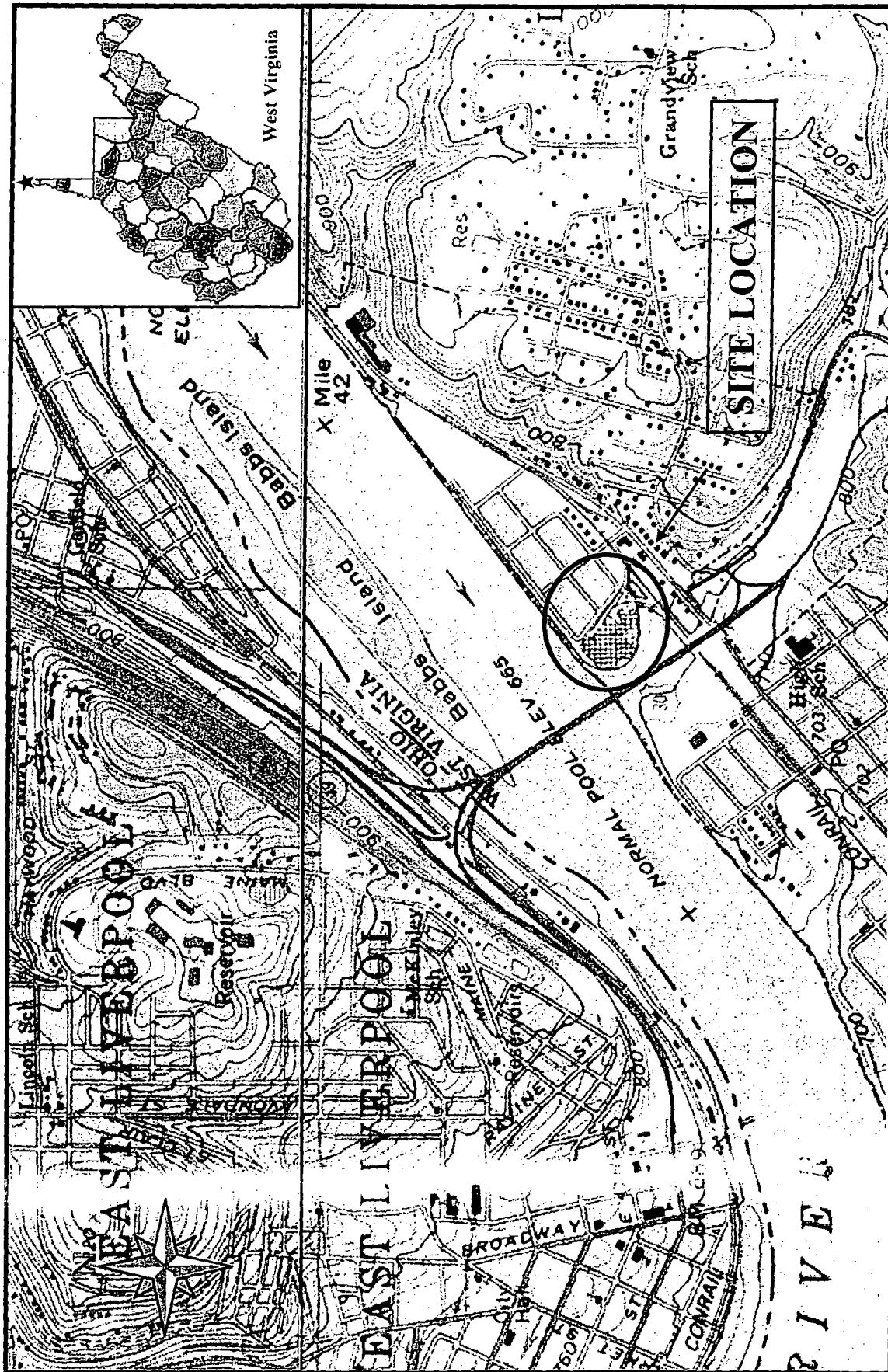
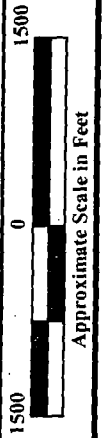


Figure 1

SITE LOCATION MAP

8th and Plutus Streets Pottery Site
Chester, Hancock County
West Virginia



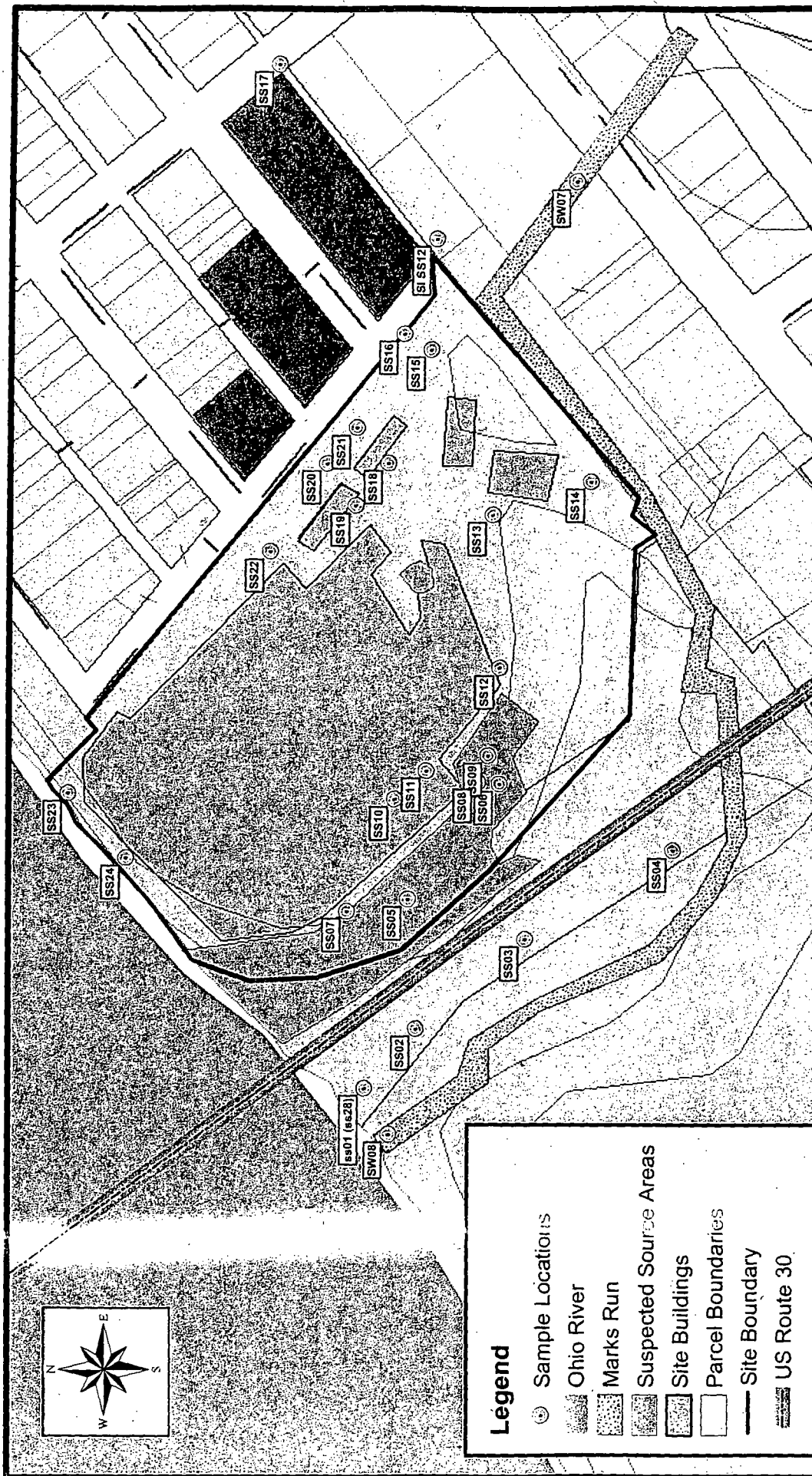
Date: 5-16-02
Map by: WFFH
TDD No. SW3-02-04-003



ecology and environment, inc.
International Specialists in the Environment
Wheeling, West Virginia

Source: USGS 7.5 Minute Topographic Quadrangle
East Liverpool South, 1960, photorevised 1985

ATTACHMENT 2



Legend

- Sample Locations
- Ohio River
- Marks Run
- Suspected Source Areas
- Site Buildings
- Parcel Boundaries
- Site Boundary
- US Route 30



ecology and environment, inc.
 START-2
 Wheeling, West Virginia
EPA/START Contract No. 68-S3-00-01

8th and Plutus Streets Pottery Sample Location Map

210 105 210 Feet

Drawn by:
 WFM
 Map Date:
 01/5/03 Rev.3

TDD No. SW3-02-09-0005
 JOB No. 1262.0323.01SF

SOURCE:
 Base map procured from Hancock County Courthouse
 Shading generated based on GPS reference points and interpretation

8th and Plutus Streets Pottery Site June Sample Data Summary

LOCATION	SAMPLE	MATRIX	TYPE	DATE	TIME	Lead (ppm)	Aroclor 1260 (ppb)*
SW07	MC0340	Surface Water	Lab QC	6/18/2003	17:30	116	
SW08	MC0341	Surface Water	Field Sample	6/18/2003	15:19	nd	
SW09	MC0342	Surface Water	Field Dup of C0340	6/18/2003	17:35	5.4 (k)	
SW10	MC0343	Surface Water	Field Blank	6/18/2003	10:30		
SS01	MC0301	Soil/Sediment	Lab QC	6/18/2003	15:48	58.7	58
SS02	MC0302	Soil/Sediment	Field Sample	6/18/2003	16:28	1460	92
SS03	MC0303	Soil/Sediment	Field Sample	6/18/2003	16:20	56.7	nd
SS04	MC0304	Soil/Sediment	Field Sample	6/18/2003	16:48	1070	33
SS05	MC0305	Soil/Sediment	Field Sample	6/19/2003	14:45	30300	
SS06	MC0306	Soil/Sediment	Field Sample	6/19/2003	13:51	2450	
SS07	MC0307	Soil/Sediment	Field Sample	6/19/2003	14:22	11000	
SS08	MC0308	Soil/Sediment	Field Sample	6/12/2003	14:08	2960	
SS09	MC0309	Soil/Sediment	Field Sample	6/19/2003	14:51	5520	
SS10	MC0310	Soil/Sediment	Field Sample	6/19/2003	11:45	22300	
SS11	MC0311	Soil/Sediment	Field Sample	6/19/2003	11:45	8050	
SS12	MC0312	Soil/Sediment	Field Sample	6/19/2003	11:30	2190	250
SS13	MC0313	Soil/Sediment	Field Sample	6/17/2003	11:05	742	36
SS14	MC0314	Soil/Sediment	Lab QC	6/17/2003	10:00	31.7	
SS15	MC0315	Soil/Sediment	Field Sample	6/17/2003	13:52	592	36
SS16	MC0316	Soil/Sediment	Field Sample	6/17/2003	13:40	1880	
SS17	MC0317	Soil/Sediment	Field Sample	6/19/2003	09:50	119	43
SS18	MC0318	Soil/Sediment	Field Sample	6/17/2003	11:13	655	680
SS19	MC0319	Soil/Sediment	Field Sample	6/17/2003	11:33	1500	
SS20	MC0320	Soil/Sediment	Field Sample	6/17/2003	14:15	150	93
SS21	MC0321	Soil/Sediment	Field Sample	6/17/2003	14:36	748	110
SS22	MC0322	Soil/Sediment	Field Sample	6/17/2003	14:53	559	110
SS23	MC0323	Soil/Sediment	Field Sample	6/17/2003	15:28	825	21000+
SS24	MC0324	Soil/Sediment	Field Sample	6/17/2003	15:34	6090	2000+
SS28	MC0329	Soil/Sediment	Field Dup of C0301	6/18/2003	15:50	63.3	46
SS29	MC0330	Soil/Sediment	Field Dup of C0314	6/17/2003	09:55	38.1	
SS30	MC0331	Soil/Sediment	Field Dup of C0321	6/17/2003	14:38	1020	

* All PCB results should be considered estimated as most were qualified "J"

ATTACHMENT 3

8th and Plutus Streets Pottery Site
TDD# SW3-02-09-0005

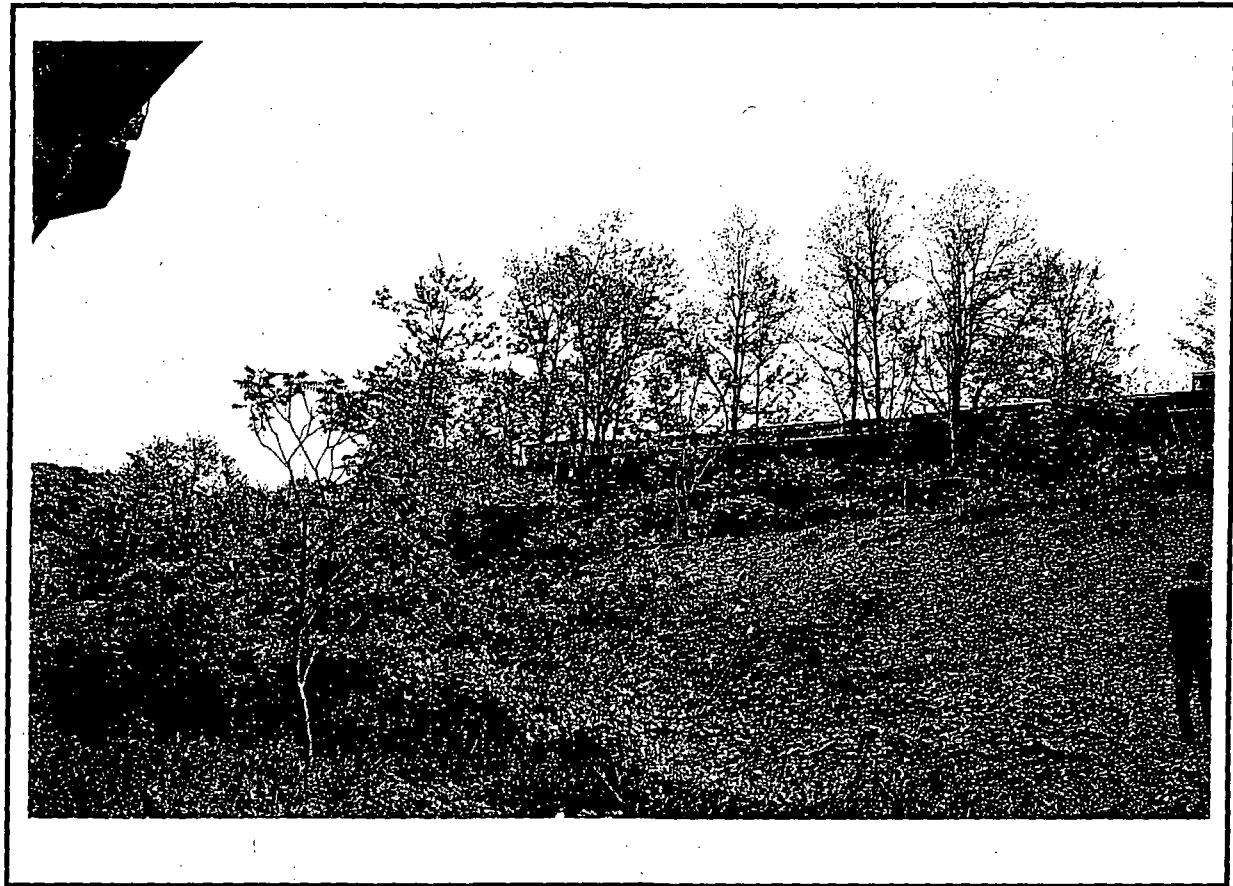


DATE: 18 June 2003

PHOTO BY: Region III START

DESCRIPTION: Photo of sample being collected in direct proximity of transformers staged near the center of the site.

8th and Plutus Streets Pottery Site
TDD# SW3-02-09-0005

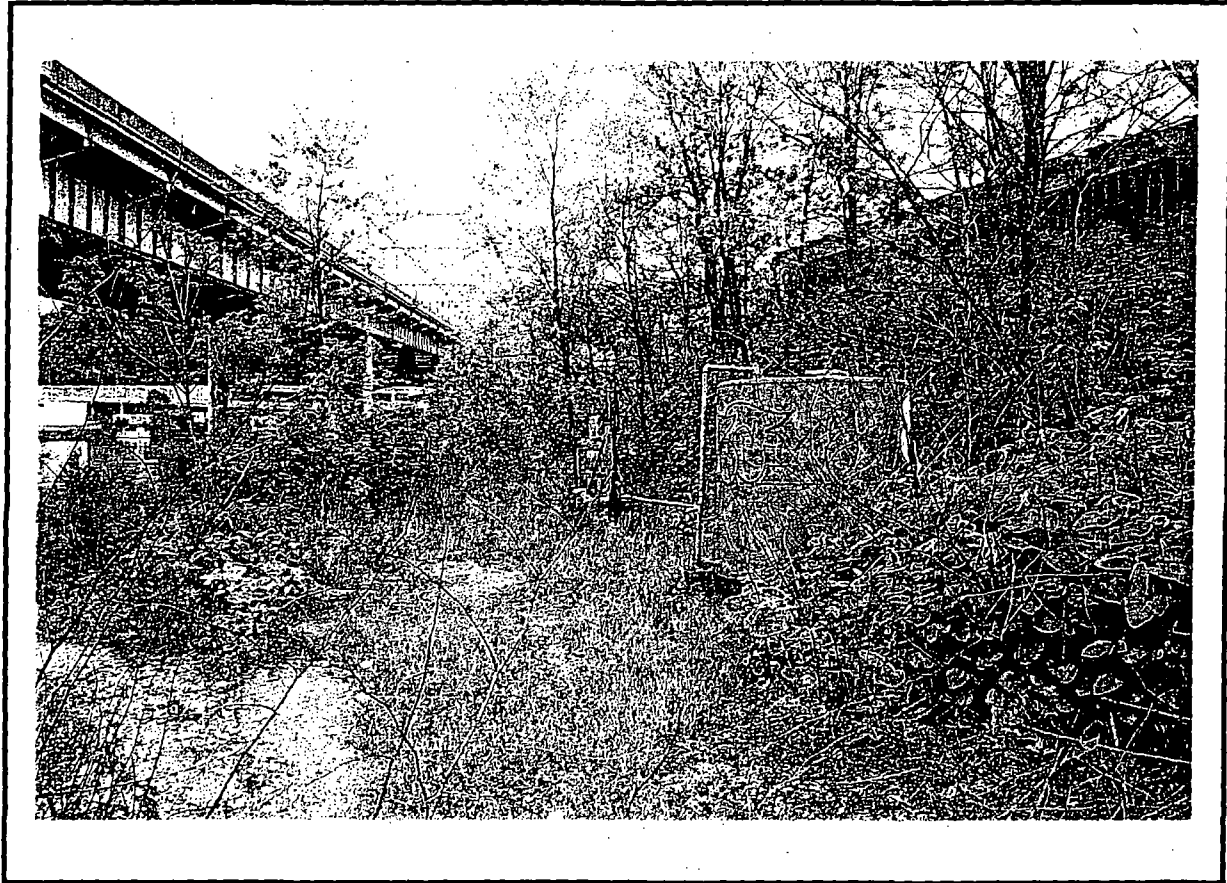


DATE: 12 May 2002

PHOTO BY: Region III START

DESCRIPTION: Photo of ceramic waste debris pile located on the west side of the site partially covering the Rt. 30 bridge parcel.

8th and Plutus Streets Pottery Site
TDD# SW3-02-09-0005

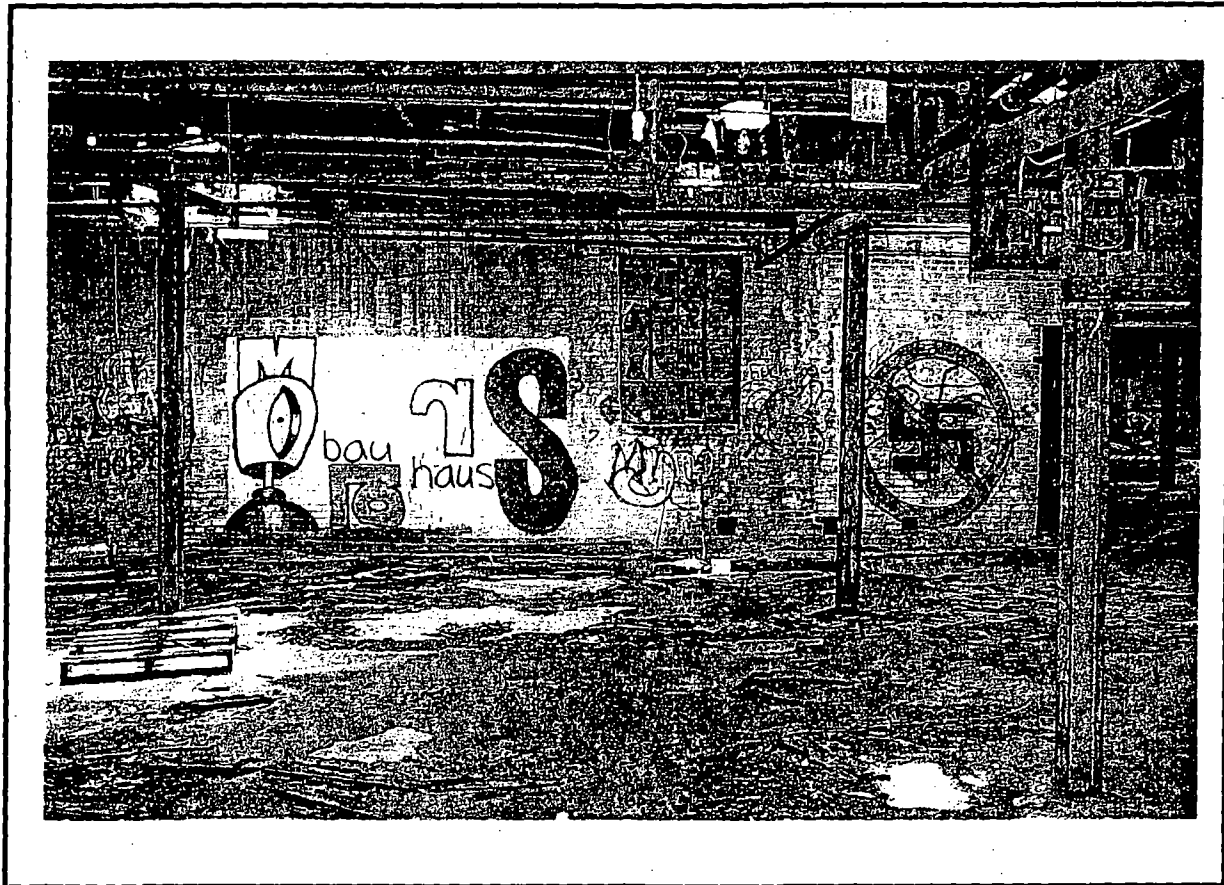


DATE: 17 May 2002

PHOTO BY: Region III START

DESCRIPTION: Photo of waste debris and oil well located on west side of site.

8th and Plutus Streets Pottery Site
TDD# SW3-02-09-0005

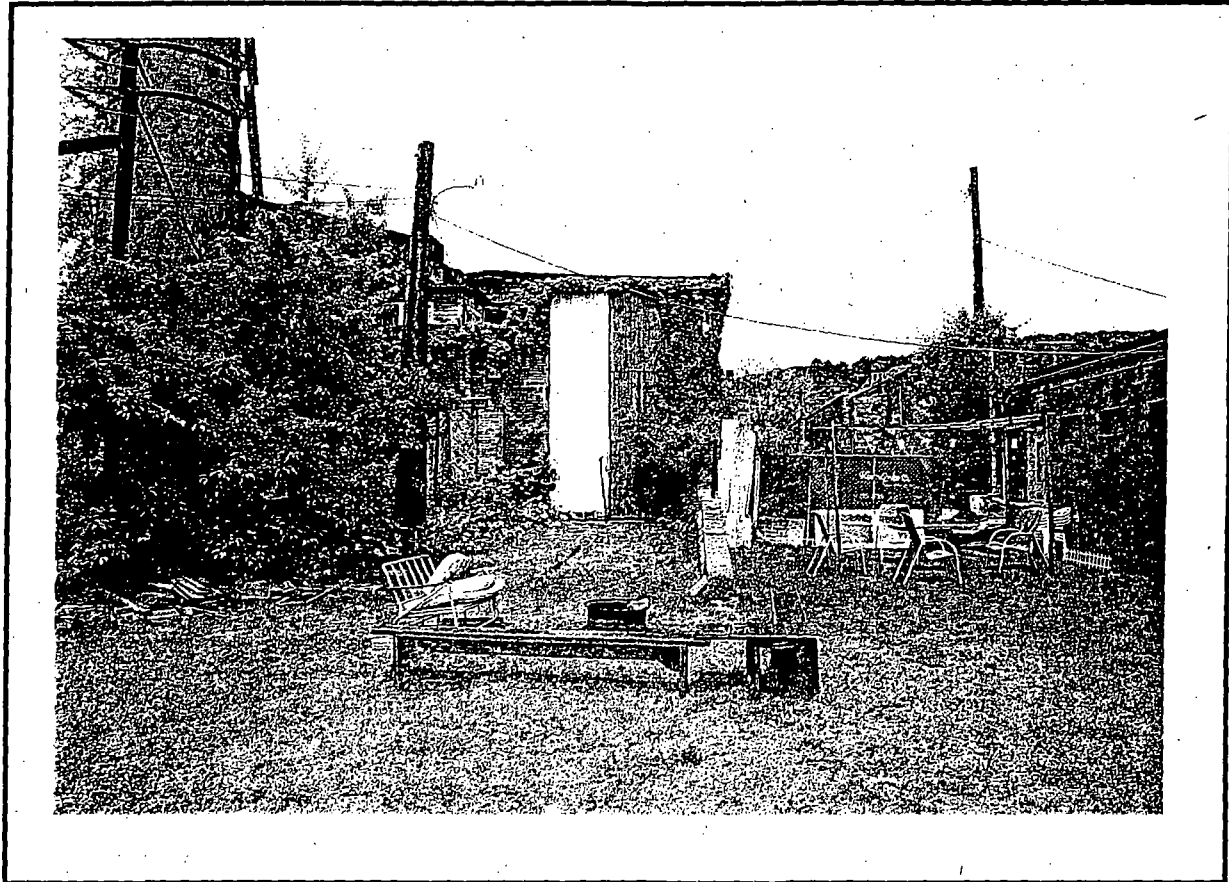


DATE: 17 May 2002

PHOTO BY: Region III START

DESCRIPTION: Photo shows extent of graffiti which indicates the frequent presence of trespassers.

8th and Plutus Streets Pottery Site
TDD# SW3-02-09-0005



DATE: 17 May 2002

PHOTO BY: Region III START

DESCRIPTION: Photo shows area of facility property used for recreation by the tenants of the on-site office building.

8th and Plutus Streets Pottery Site
TDD# SW3-02-09-0005



DATE: 9 May 2003

PHOTO BY: Region III START

DESCRIPTION: Photo shows the extent of ceramic molds and debris staged inside the main facility building.

ATTACHMENT 4

WV - DHHR - BPH - OEHS - FISH

DHHR Site Search - DHHR Site Map

WV Fish Consumption Advisories

WV Fish Consumption Advisories

Current Fish Advisories

General Info
Current Fish Advisories
General Advisory Info
Advisories Frequently Asked Questions
Updated Shenandoah River Advisory
EPA & FDA Mercury Advice
WV Sportfish Consumption — Advisory
EPA-The National Listing of Fish and Wildlife Advisories (NLPWA)



Stream/Advisory Area	Contaminant	Species Affected	Consumption Advice (1 meal=1/2 lb of fish)
Ohio River, Entire length in WV	PCBs, *Dioxin & Mercury *Contaminant not detected in all sections	smallmouth bass, largemouth bass, sauger	1 meal/week
		white bass, hybrid striped bass, freshwater drum	1 meal/month
		flathead catfish, channel catfish under 17" long	6 meals/year
		carp, channel catfish more than 17" long	DO NOT EAT!
Kanawha River and backwaters, from I-64 bridge in Dunbar to the Ohio River AND Pocatalico River, lower two miles,	Dioxin	carp, catfish, suckers, hybrid striped bass	DO NOT EAT! 1 meal/month

AND Armour, Manlia, and Heizer Creeks		All other fish species	
Shenandoah River, Entire length in WV	PCBs	carp, suckers, channel catfish All other fish species	DO NOT EAT! 1 meal/month
Potomac River, Entire length in WV AND North Branch of Potomac R., From Luke MD to mouth	Dioxin	non-sport fish (suckers, etc.)	DO NOT EAT!
Flat Fork Creek, Roane Co. Entire length	PCBs	carp, suckers, channel catfish	DO NOT EAT!

WV > DHHR > OEHS > FISH

ATTACHMENT 5

Name: Lora Siegmann Werner
LOG #:

ATSDR Record of Activity

UID #: 1kw9 Date: 8/18/03 Time: 3:00 am pm ☒
Site Name: 8th and Plutus Pottery Site City: Chester Cty: Hancock State: WV
CERCLIS #: _____ Cost Recovery #: _____ Region: 3

Site Status: (1) ☐ NPL ☒ Non-NPL RCRA ☐ Non-Site specific ☐ Federal
(2) ☒ Emergency Response ☐ Remedial ☐ Removal ☐ Other:

Activities

☐ Incoming Call ☐ Public Meeting ☒ Health Consult ☐ Site Visit
☐ Outgoing Call ☐ Other Meeting ☐ Health Referral ☐ Info Provided
☒ Conference Call ☐ Data Review ☐ Written Response ☐ Training
☐ Incoming Mail ☐ Other

Requestor and Affiliation: Marjorie Easton, EPA OSC

Contacts and Affiliation

Alrena Lightbourn, WV BPH

Program Areas

☐ Health Assessment ☐ Health Studies ☐ Tox Info-profile
☐ Worker Health ☐ Petition Assessment ☐ Health Surveillnc
☐ Tox Info-Nonprofile ☐ Admin ☐ Emergency Response
☐ Disease Registry ☐ Subst-Spec Research ☐ Other (Technical Assist)
☒ Health Consultation ☐ Exposure Registry ☐ Health Education

Narrative Summary:

On 8/15/03, OSC Easton provided soil, surface water, and sediment sampling results for the 8th and Plutus pottery site in Hancock, WV for ATSDR's review. This is a - 9 acre site that operated as a pottery manufacturer from 1900-1981. EPA found very high levels of lead in surface soils throughout the property and in adjacent areas. There were also a limited number of samples showing detections of 1260 Arochlor PCB, probably from some electrical transformers that were left on the site. The site is partially fenced. However, the site access gates have been open or missing during site visits, and an old facility office within the site boundaries is being used as a residence. There was evidence that children may be living in this onsite residence. The site is also located across the street from a 32-unit apartment complex.

On the southwest portion of the site are large piles of pottery shards. Some of the highest levels of lead were discovered in this area. The piles are vegetated and located on the southeast side of the property. Heavy ceramic chunks are located on the piles and the material is not air borne. The piles have not been fully defined as the vegetation was not completely cleared. These piles are located on a steep embankments that trail directly into the Ohio River. All of the runoff from the site eventually reaches the Ohio River. All of the nearby residents are on municipal water. However, the Ohio River is a source for downstream water supplies and is used as a recreation area.

I reviewed these results with the toxicologist from WV BPH, Alrena Lightbourn. We agreed that these levels of lead surface soil contamination are of high concern because they are accessible to residents, including children. We also had some concerns about the levels of PCBs found onsite.

Action Required/Recommendations/Info Provided:

- EPA should take immediate efforts to reduce access to and limit further spread of the most heavily contaminated surface soil and piles of pottery shards. This is of particular concern for the areas of lead contamination closest to the facility building being used as a residence and the nearby apartment complex.
- Information should be provided to the nearby residents about the contamination and how they can take steps to reduce their families' exposure by limiting tracking in, encouraging handwashing, etc. They should also be provided information about blood lead testing. WVBPH and ATSDR will work with the local Hancock County Health Department to implement this recommendation.
- EPA should consider the possibility that fish may be contaminated with PCBs from this site.
- EPA should evaluate whether groundwater beneath this site is also contaminated, and confirm that no private wells are in use near the site.

Enclosures: Yes () No (x); HAZDAT entry: Yes () No (x)

Signature _____ Date: _____

CC: J. Reyes
C. Walters
file

EXHIBIT D
(EPA REGION III RISK-BASED
CONCENTRATION TABLE)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103

SUBJECT: Risk-Based Concentration Table

FROM: Jennifer Hubbard, Toxicologist
Technical Support Section (3HS41)

TO: RBC Table Users

DATE: April 14, 2004

Attached is the EPA Region III Risk-Based Concentration (RBC) Table, which we prepare and post periodically for all interested parties. The Table's current web address is <http://www.epa.gov/reg3hwmd/risk/human/index.htm>

For questions about the Table, please consult this memo. You can also consult the RBC Table companion documents, such as the Technical Background Document and Frequently Asked Questions, that are posted on the website. If you don't find the answer there, and your question is about risk assessment or the science behind the RBCs, you can reach me at hubbard.jennifer@epa.gov or 215-814-3328. For technical difficulties in reading, displaying, or downloading the table from the web, please contact piernock.andrea@epa.gov.

BASIC INFORMATION

The RBC Table contains Reference Doses (RfDs) and Cancer Slope Factors (CSFs) for 400-500 chemicals. These toxicity factors have been combined with "standard" exposure scenarios to calculate RBCs--chemical concentrations corresponding to fixed levels of risk (i.e., a Hazard Quotient (HQ) of 1, or lifetime cancer risk of $1E-6$, whichever occurs at a lower concentration) in water, air, fish tissue, and soil. The equations and the exposure factors are shown in the RBC Table companion memo, the Technical Background Document.

The Region III toxicologists use RBCs to screen sites not yet on the NPL, respond rapidly to citizen inquiries, and spot-check formal baseline risk assessments. The primary use of RBCs is for chemical screening during baseline risk assessment (see EPA Regional Guidance EPA/903/R-93-001, "Selecting Exposure Routes and Contaminants of Concern by Risk-Based Screening"). The exposure equations come from EPA's Risk Assessment Guidance for Superfund (RAGS), while the exposure factors are those recommended in RAGS or supplemental guidance from the Superfund program. The attached Technical Background Document provides specific equations and assumptions. Simply put, RBCs are like risk assessments run in reverse. For a single contaminant in a single medium, under standard default exposure assumptions, the RBC corresponds to the target risk or hazard quotient.

RBCs also have several important limitations. Specifically excluded from consideration are (1) transfers from soil to air, (2) cumulative risk from multiple contaminants or media, and (3) dermal risk. Additionally, the risks for inhalation of vapors from water are based on a very simple model, whereas detailed risk assessments may use more detailed showering models. Many RBCs are also based on adult risks. For more information about children's risks, see the Technical Background Document and Frequently Asked Question #12. Furthermore, the toxicity information in the Table has been assembled by hand and (despite extensive checking and years of use) may contain errors. It's advisable to cross-check before relying on any RfDs or CSFs in the Table. If you note any errors, please let us know.

It is important to note that, at this time, the Table uses inhalation RfDs and CSFs rather than RfCs (Reference Concentrations) and inhalation unit cancer risks. This was initially done because the latter factors incorporate exposure assumptions and were ostensibly based on residential adults. Because risk assessors needed to evaluate risks for many types of scenarios, the factors were converted to the more traditional RfDs and CSFs. Unless otherwise indicated in the toxicity-factor source, the assumption was that RfCs and unit risks should be adjusted by a 70-kilogram body weight and a 20 m³/day inhalation rate to generate the RfDs and CSFs. In fact, for adults, the use of an inhalation RfD vs. an RfC does not typically change the risk estimate significantly.

Many users want to know if the RBCs can be used as valid no-action levels or cleanup levels, especially for soils. The answer is a bit complex. First, it is important to realize that the RBC Table does not constitute regulation or guidance, and should not be viewed as a substitute for a site-specific risk assessment. For sites where:

- A single medium is contaminated;
- A single contaminant contributes nearly all the health risk;
- Volatilization, dermal contact, and other pathways not included in the RBCs are not expected to be significant;
- The exposure scenarios and assumptions used in the RBC table are appropriate for the site;
- The fixed risk levels used in the RBC table are appropriate for the site; and
- Risk to ecological receptors is not expected to be significant;

the RBCs would probably be protective as no-action levels or cleanup goals. However, to the extent that a site deviates from this description, as most do, the RBCs would not necessarily be appropriate.

To summarize, the Table should generally not be used to set cleanup or no-action levels at CERCLA sites or RCRA Corrective Action sites, to substitute for EPA guidance for preparing baseline risk assessments, or to determine if a waste is hazardous under RCRA.

FEATURES OF THE TABLE

The RBC Table was originally developed by Roy L. Smith, Ph.D., for use by risk

assessors in the Region III Superfund program. Dr. Smith is no longer with Region III, and the Table continues to evolve. The following features of the table should be noted; some of the current features differ from those of past versions of the RBC Table.

WHAT'S NEW THIS UPDATE

Table users may notice a new source code on the table, "P." This indicates provisional peer-reviewed toxicity values from the EPA database located at <http://hhpprtv.ornl.gov/>

OTHER FEATURES AND HISTORICAL CHANGES

As usual, updated toxicity factors have been used wherever available. However, because IRIS and provisional values are updated more frequently than the RBC Table, RBC Table users are ultimately responsible for obtaining the most up-to-date values. The RBC Table is provided as a convenience, but toxicity factors are compiled from the original sources and it is those original sources that should serve as the definitive reference.

Many provisional values have been withdrawn or updated recently. Also, Region III has continued to prune "W" values, which usually represent numbers withdrawn from IRIS or HEAST. As a result, the following chemicals have been deleted from the RBC Table until new recommended values are available: butylbenzenes, crotonaldehyde, dicofol, dimethylamine, dimethylhydrazines, 2-hexanone, methylhydrazine, nitric oxide, nitrogen dioxide, 4-nitrophenol, n-propylbenzene, and thallic oxide.

Please note that the "industrial soil" numbers were changed on the April 2003 RBC Table to reflect the higher soil ingestion rate of the outdoor worker. This is consistent with the new draft SSL Guidance and with the practice in other regions, as well as providing for additional protection of workers.

Changes to the table since the last semi-annual version have been marked with asterisks (**). Changes may involve a corrected CAS number or a correction in the VOC status, a change in the SSL, or changes of RfDs and CSFs.

A note about nitrate and nitrite has been added to the Alternate RBC Table. These chemicals can affect the special subpopulation of infants, and the tap water RBCs for noncarcinogens are typically based on adult exposure. Therefore, alternate RBCs may be warranted for populations that include infants.

RBCs are not rounded to 1E6 ppm, as they were in some earlier versions of the Table. For certain low-toxicity chemicals, the RBCs exceed possible concentrations at the target risks. In such cases, Dr. Smith rounded these numbers to the highest possible concentration, or 1E6 ppm. This type of truncation has been discontinued so that Table users can adjust the RBCs to a different target risk whenever necessary. For example, when screening chemicals at a target HQ of 0.1, noncarcinogenic RBCs may simply be divided by 10. Such scaling is not possible when RBCs are rounded. Users who are

interested in truncation can also consult the Soil Screening Guidance for a discussion of "C_{sat}," the saturation concentration.

At Region III Superfund sites, noncancer RBCs are typically adjusted downward to correspond to a target HQ of 0.1 rather than 1. (This is done to ensure that chemicals with additive effects are not prematurely eliminated during screening. Note that the RBCs displayed on the table are shown at an HQ of 1; to arrive at the RBC at 0.1, data users must do the conversion themselves.) However, some chemicals have RBCs at HQs of 0.1 that are lower than their RBCs at 1E-6 cancer risk. In other words, the screening RBC would change from carcinogenic to noncarcinogenic. A feature of this Table is that these chemicals are now flagged with a "!" symbol. Therefore, assessors screening with adjusted RBCs will be alerted to this situation. See the companion attachment to the RBC Table, "Alternate RBCs," for alternate values for "!" RBCs.

Earlier versions of this Table included a substitution of inhalation toxicity factors for oral factors whenever oral factors were unavailable (this applied only to groundwater and air, but not soil or fish). This practice was discontinued in order to minimize the uncertainty associated with such a conversion. The discontinuation of this practice did not significantly decrease the number of available RBCs.

The criterion for "VOC status" is in accordance with RAGS Part B: chemicals with Henry's Law constants greater than 1E-5 and molecular weight less than 200 are marked as VOCs.

Earlier versions of this Table included soil screening levels (SSLs), when those values were available in draft form. Since the finalization of the SSL Guidance, risk assessors are urged to consult the final SSL Guidance directly. However, for generic use in Region III, the table now contains soil-to-groundwater SSLs in accordance with the new guidance. For more information, see the Region III memo on SSLs, or consult the national SSL guidance directly (Soil Screening Guidance: User's Guide, April 1996, Publication 9355.4-23; and Soil Screening Guidance: Technical Background Document, May 1996; EPA/540/R-95/128; as well as Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, Peer Review Draft, March 2001; OSWER 9355.4-24).

You may notice there are two rows for uranium, one reflecting the IRIS (EPA consensus) value and the other reflecting a more recent, but provisional, value. Region III has shown both on this table, rather than choosing one over the other, to give Table users as much information as possible.

Vinyl chloride is handled differently from most other chemicals because of the unique aspects of its slope factor derivation. Readers are referred to the memo, Derivation of Vinyl Chloride RBCs, which is a companion document to this RBC Table.

Chemical	CAS	RfD mg/kg	CSFs 1/mg/kg	RfD mg/kg	CSFs 1/mg/kg	VOC	Risk-based concentrations					Region III SSLs		
							Tap water ug/l	Ambient air ug/m ³	Fish mg/kg	Soil Industrial mg/kg	Residential mg/kg	Soil for groundwater migration DAF 1 mg/kg	DAF 20 mg/kg	
ACETALDEHYDE	75070					Y	1.6E+000 C	8.1E+001 C				3.8E+004	7.7E+003 C	
ACETOCHLOR	34258621	2E+002 I					7.3E+002 N	7.3E+001 N	2.7E+001 N	2.0E+004 N	1.6E+003 N	1.1E+000	2.2E+001 N	
ACETONE	67641	9.00E+001 I				Y	5.5E+003 N	3.3E+003 N	1.2E+003 N	9.2E+005 N	7.0E+004 N	2.9E+002	5.8E+001 N	
ACETONITRILE	75058	1.00E+001 I				Y	1.2E+002 N	6.2E+001 N				1.6E+001	3.2E+000 N	
ACETOPHENONE	98662	5.00E+004 I				Y	6.1E+002 N	3.7E+002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N	1.0E+005	2.0E+004 N	
ACROLEIN	107028	2.00E+004 I	4.50E+000 I			Y	4.2E+002 N	2.1E+002 N	8.8E+001 N	5.1E+002 N	3.9E+001 N	3.7E+006	7.4E+005 C	
ACRYLAMIDE	79081	1.00E+003 H	5.40E+001 I			Y	1.5E+002 C	1.4E+003 C	7.0E+004 C	8.4E+001 C	1.4E+001 C	7.4E+006	1.5E+004 C	
ACRYLONITRILE	107131	1.00E+003 H	5.40E+001 I			Y	3.7E+002 C	2.0E+002 C	9.8E+003 C	5.3E+000 C	1.2E+000 C	3.5E+004	7.0E+003 C	
ALACHLOR	15872608	1.00E+002 I	8.00E+002 H				8.4E+001 C	7.8E+002 C	3.8E+002 C	3.6E+001 C	8.0E+000 C			
ALAR	1596845	1.00E+001 I					5.5E+003 N	5.5E+002 N	2.0E+002 N	1.5E+005 N	1.2E+004 N	1.0E+002	2.1E+001 N	
ALDICARB	116093	1.00E+003 I					3.7E+001 N	3.7E+000 N	1.4E+000 N	1.0E+003 N	7.8E+001 N	7.5E+003	1.5E+001 N	
ALDICARB SULFONE	164884	1.00E+003 I					3.7E+001 N	3.7E+000 N	1.4E+000 N	1.0E+003 N	7.8E+001 N			
ALDRIN	309002	3.00E+005 I	1.70E+001 I				3.9E+003 C	3.7E+004 C	1.9E+004 C	1.7E+001 C	3.8E+002 C			
ALUMINUM	7429905	1.00E+000 P					3.7E+004 N	3.7E+000 N	1.4E+003 N	1.0E+006 N	7.8E+004 N			
AMINOINITROBENZENES		2.00E+004 E					7.3E+000 N	7.3E+001 N	2.7E+002 N	2.0E+002 N	1.6E+001 N			
4-AMINOPYRIDINE	504245	2.00E+005 H					7.3E+001 N	7.3E+002 N	2.7E+002 N	2.0E+001 N	1.6E+000 N			
AMMONIA	7804417					Y	2.1E+002 N	1.0E+002 N				8.8E+003	1.4E+001 C	
ANILINE	62533	7.00E+003 P	5.70E+003 I				1.2E+001 C	1.1E+000 N	5.5E+001 C	5.0E+002 C	1.1E+002 C	6.6E+001	1.3E+001 N	
ANTIMONY	7440380	4.00E+004 I					1.5E+001 N	1.5E+000 N	5.4E+001 N	4.1E+002 N	3.1E+001 N			
ANTIMONY PENTOXIDE	1314809	5.00E+004 H					1.8E+001 N	1.8E+000 N	8.8E+001 N	5.1E+002 N	3.9E+001 N			
ANTIMONY TETROXIDE	1332816	4.00E+004 H					1.5E+001 N	1.5E+000 N	5.4E+001 N	4.1E+002 N	3.1E+001 N			
ANTIMONY TRIOXIDE	1308844	4.00E+004 H					1.5E+001 N	1.5E+000 N	5.4E+001 N	4.1E+002 N	3.1E+001 N			
ARSENIC	7440382	3.00E+004 I	1.50E+000 I				4.5E+002 C	4.1E+004 C	2.1E+003 C	1.9E+000 C	4.3E+001 C	1.3E+003	2.6E+002 C	
ARSINE	7784421					Y	1.0E+001 N	5.1E+002 N						
ASSURE	78578148	9.00E+003 I					3.3E+002 N	3.3E+001 N	1.2E+001 N	9.2E+003 N	7.0E+002 N	4.4E+004	8.8E+003 C	
ATRAZINE	1812249	3.50E+002 I	2.20E+001 H				3.0E+001 C	2.8E+002 C	1.4E+002 C	1.3E+001 C	2.9E+000 C	1.8E+003	3.5E+002 C	
AZOBENZENE	103333		1.10E+001 I				6.1E+001 C	5.7E+002 C	2.8E+002 C	2.8E+001 C	5.8E+000 C	1.1E+002	2.1E+003 N	
BARIUM	7440393	7.00E+002 I					2.6E+003 N	5.1E+001 N	9.5E+001 N	7.2E+004 N	5.5E+003 N			
BAYGON	114281	4.00E+003 I					1.5E+002 N	1.5E+001 N	5.4E+001 N	4.1E+003 N	3.1E+002 N			
BAYTHROID	68353375	2.50E+002 I					9.1E+002 N	9.1E+001 N	3.4E+001 N	2.6E+004 N	2.0E+003 N			
BENTAZON	23057690	3.00E+002 I					1.1E+003 N	1.1E+002 N	4.1E+001 N	3.1E+004 N	2.3E+003 N			
BENZALDEHYDE	100527	1.00E+001 I					3.7E+003 N	3.7E+002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N			
BENZENE	71432	4.00E+003 I	5.5E+002 I			Y	3.4E+001 C	2.3E+001 C	8.7E+002 C	5.2E+001 C	1.2E+001 C	9.5E+005	1.9E+003 C	
BENZENETHIOL	108885	1.00E+005 H					6.1E+002 N	3.7E+002 N	1.4E+002 N	1.0E+001 N	7.8E+001 N			
BENZIDINE	92875	3.00E+003 I	2.30E+002 I			Y	2.8E+004 C	2.7E+005 C	1.4E+005 C	1.2E+002 C	2.8E+003 C			
BENZOIC ACID	68350	4.00E+000 I					1.5E+005 N	1.5E+004 N	5.4E+003 N	4.1E+008 N	3.1E+005 N			
BENZYL ALCOHOL	100516	3.00E+001 H				Y	1.1E+004 N	1.1E+003 N	4.1E+002 N	3.1E+005 N	2.3E+004 N	4.4E+000	8.8E+001 N	
BENZYL CHLORIDE	100447		0.17 I				8.2E+002 C	3.7E+002 C	1.8E+002 C	1.7E+001 C	3.8E+000 C	1.9E+005	3.7E+004 C	
BERYLIIUM	7440417	2.00E+003 I					7.3E+001 N	7.5E+004 C	2.7E+000 N	2.0E+003 N	1.8E+002 N	5.8E+001	1.2E+003 N	
BIPHENYL	92524	5.00E+002 I				Y	3.0E+002 N	1.8E+002 N	6.8E+001 N	5.1E+004 N	3.8E+003 N	4.8E+000	9.6E+001 N	
BIS(2-CHLOROETHYL)ETHER	111444		1.10E+000 I			Y	9.6E+003 C	5.7E+003 C	2.9E+003 C	2.6E+000 C	5.8E+001 C	2.2E+006	4.4E+005 C	
BIS(2-CHLOROISOPROPYL)ETHER	108601	4.00E+002 I	7.00E+002 H			Y	2.8E+001 C	1.8E+001 C	4.5E+002 C	4.1E+001 C	9.1E+000 C	8.4E+005	1.7E+003 C	
BIS(CHLOROMETHYL)ETHER	542881	2.00E+002 I	2.20E+002 I			Y	4.8E+005 C	2.8E+005 C	1.4E+005 C	1.3E+002 C	2.8E+003 C	9.7E+009	1.9E+007 C	
BIS(2-ETHYLHEXYL)PHTHALATE	117817	2.00E+002 I	1.40E+002 I				4.8E+000 C	4.5E+001 C	2.3E+001 C	2.0E+002 C	4.6E+001 C	1.4E+002	2.8E+003 C	
BORON	7440428	9.00E+002 I				H	3.3E+003 N	2.1E+001 N	1.2E+002 N	9.2E+004 N	7.0E+003 N			

Source	CAS	Chemical	Risk-based concentrations										Region III SSLs		
			RIDo mg/kg	CSFo 1/mg/kg	RIDi mg/kg	CSFi 1/mg/kg	VOC y	Tap water ug/l	Ambient air ug/m3	Flah mg/kg	Soil mg/kg	Industrial mg/kg	Residential mg/kg	Soil for groundwater migration	
														DAF 1 mg/kg	DAF 20 mg/kg
Base C = Carcinogenic effects N = Noncarcinogenic effects I = RBC at 10 d 0.1 = RBC-C see Alternate RBCs II = See Alternate RBCs															
E = EPA/NCEA provisional value O = other P = EPA provisional peer-reviewed value															
Bromodichloromethane	75274	BROMODICHLOROMETHANE	2.00E-002 I	6.20E-002 I				1.7E-001 C	1.0E-001 C	5.1E-002 C	4.6E+001 C	1.0E+001 C	5.4E+005	1.1E+003 C	
Bromoethene	59302	BROMOETHENE			8.6E-004 I	1.10E-001 H	Y	1.1E-001 C	5.7E-002 C				5.4E+005	1.1E+003 C	
Bromoforn	75252	BROMOFORN	2.00E-002 I	7.90E-003 I		3.90E+003 I		8.5E+000 C	1.6E+000 C	4.0E-001 C		8.1E+001 C	3.3E+003	6.7E+002 C	
Bromomethane	74839	BROMOMETHANE	1.40E-003 I		1.40E-003 I		Y	8.5E+000 N	5.1E+000 N	1.9E-001 N	1.4E+003 N	1.1E+002 C	2.1E+003	4.1E+002 N	
Bromophos	2104863	BROMOPHOS	5.00E-003 H					1.8E-002 N	1.8E+001 N	8.8E+000 N	5.1E+003 N	3.9E+002 N			
1,3-Butadiene	108990	1,3-BUTADIENE			5.7E-004 I	1.00E-001 I	Y	1.3E-001 C	6.3E-002 C				7.0E+005	1.4E+003 C	
1-Butanol	71563	1-BUTANOL	1.00E-001 I					3.7E+003 N	3.7E-002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N	7.8E+001	1.6E+001 N	
Butylbenzylphthalate	85687	BUTYLBENZYLPHTHALATE	2.00E-001 I					7.3E+003 N	7.3E-002 N	2.7E+002 N	2.0E+005 N	1.6E+004 N	8.4E+002	1.7E+004 N	
Butylate	2089415	BUTYLATE	5.00E-002 I					1.8E+003 N	1.8E-002 N	6.8E+001 N	5.1E+004 N	3.9E+003 N			
Cadmium-Water	7440439	CADMIUM-WATER	5.00E-004 I		5.7E+005 E	6.30E+000 I		1.8E+001 N	9.8E-004 C	6.8E+001 N	5.1E-002 N	3.9E+001 N			
Cadmium-Food	7440439	CADMIUM-FOOD	1.00E-003 I		5.7E+005 E	6.30E+000 I		3.7E+001 N	9.9E-004 C	1.4E+000 N	1.0E+003 N	7.8E+001 N	1.4E+000	2.7E+001 N	
Caprolactam	105802	CAPROLACTAM	5.00E-001 I					1.8E+004 N	1.8E+003 N	8.8E+002 N	5.1E+005 N	3.9E+004 N	2.7E+000	5.5E+001 N	
Carbaryl	83252	CARBARYL	1.00E-001 I					3.7E+003 N	3.7E-002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N	1.5E+000	3.0E+001 N	
Carbon Disulfide	75150	CARBON DISULFIDE	1.00E-001 I		2.00E-001 I		Y	1.0E+003 N	7.3E-002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N	9.5E+001	1.9E+001 N	
Carbon Tetrachloride	56235	CARBON TETRACHLORIDE	7.00E-004 I	1.30E-001 I	5.71E+004 E	5.30E+002 I	Y	1.0E-001 C	1.2E-001 C	2.4E+002 C	2.0E+005 N	4.9E+000 C	1.1E+004	2.1E+003 C	
Carbosulfen	55285148	CARBOSULFEN	1.00E-002 I					3.7E+002 N	3.7E+001 N	1.4E+001 N	1.0E+004 N	7.8E+002 N			
Chloral Hydrate	302170	CHLORAL HYDRATE	1.00E-001 I					1.7E+003 N	3.7E-002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N			
Chloranil	118752	CHLORANIL		4.00E-001 H				1.7E-001 C	1.8E-002 C	7.9E-003 C	1.8E+000 C		4.6E-002	9.2E-001 C	
Chlordane	57749	CHLORDANE	5.00E-004 I	3.5E-001 I	2.00E-004 I	3.5E+001 I		1.0E-001 C	1.8E-002 C	9.0E-003 C	8.2E+000 C	1.8E+000 C			
Chlorine	7782305	CHLORINE	1.00E-001 I		5.7E+005 E		Y	4.2E-001 N	2.1E-001 N	1.4E+002 N	1.0E+005 N	7.8E+003 N			
Chlorine Dioxide	10049044	CHLORINE DIOXIDE	3.00E-002 I		5.70E+005 I		Y	4.2E-001 N	2.1E-001 N	1.4E+002 N	1.0E+005 N	7.8E+003 N			
Chloroacetic Acid	79118	CHLOROACETIC ACID	2.00E-003 H					7.3E-001 N	7.3E+000 N	2.7E+000 N	2.0E+003 N	1.6E+002 N	4.6E-002	9.7E-001 N	
4-Chloroaniline	108478	4-CHLOROANILINE	4.00E-003 I					1.5E-002 N	1.5E+001 N	3.4E+000 N	4.1E+003 N	3.1E+002 N	4.0E-002	8.0E-001 N	
Chlorobenzene	108987	CHLOROBENZENE	2.00E-002 I					1.1E-002 N	6.2E-001 N	2.7E-001 N	2.0E+004 N	1.6E+003 N	1.3E+003	2.7E-002 C	
P-Chlorobenzoic Acid	510156	P-CHLOROBENZOIC ACID	2.00E-002 I		2.70E-001 H		Y	2.5E-001 C	2.3E-002 C	1.2E-002 C	1.1E-001 C	2.4E+000 C			
2-Chloro-1,3-Butadiene	74113	2-CHLORO-1,3-BUTADIENE	2.00E-001 H					7.3E+003 N	7.3E-002 N	2.7E-002 N	2.0E+005 N	1.6E+004 N			
1-Chlorobutane	128598	1-CHLOROBUTANE	2.00E-002 A				Y	1.4E+001 N	7.3E+000 N	2.7E+001 N	2.0E+004 N	1.6E+003 N	6.0E+003	1.2E-001 N	
1-Chloro-1,1-Difluoroethane	106933	1-CHLORO-1,1-DIFLUOROETHANE	4.00E-001 H					2.4E+003 N	1.5E+003 N	5.4E+002 N	4.1E+005 N	3.1E+004 N	1.0E+000	2.0E+001 N	
Chlorodifluoromethane	75693	CHLORODIFLUOROMETHANE			1.40E-001 I		Y	1.0E+005 N	5.1E+004 N				7.0E+001	1.4E+003 N	
Chloroethane	75456	CHLOROETHANE	1.40E-001 I					1.0E+005 N	5.1E+004 N				7.0E+001	1.4E+003 N	
Chloroform	75003	CHLOROFORM	4.00E-001 E	2.90E-003 E	2.90E+000 I	8.10E-002 I	Y	3.6E+000 C	2.2E+000 C	1.1E+000 C	9.8E+002 C	2.2E+002 C	9.6E+004	1.9E-002 C	
Chloromethane	67863	CHLOROMETHANE	1.00E-002 I		1.4E-002 E		Y	1.5E-001 C	7.7E-002 C	1.4E+001 N	1.0E+004 N	7.8E+002 N	9.6E+004	9.1E-004 C	
4-Chloro-2-Methylaniline	74873	4-CHLORO-2-METHYLANILINE		5.80E-001 H			Y	1.9E-002 N	9.5E-001 N				4.6E-002	9.3E-001 N	
Beta-Chloronaphthalene	95992	BETA-CHLORONAPHTHALENE						1.2E-001 C	1.1E-002 C	5.4E-003 C	4.9E+000 C	1.1E+000 C			
O-Chloronitrobenzene	91387	O-CHLORONITROBENZENE	8.00E-002 I				Y	4.9E-002 N	2.9E-002 N	1.1E-002 N	8.2E+004 N	6.3E+003 N	1.6E+000	3.2E+001 N	
P-Chloronitrobenzene	88733	P-CHLORONITROBENZENE	1.00E-003 P	9.7E-003 P	2.00E+005 P		Y	1.5E-001 N	7.3E-002 N	3.3E-001 C	3.0E+002 C	6.6E+001 C			
2-Chlorophenol	100005	2-CHLOROPHENOL	1.00E-003 P	6.7E-003 P	1.7E+004 P		Y	1.2E+000 N	8.2E-001 N	4.7E-001 C	4.3E+002 C	7.6E+001 N			
2-Chloropropene	95578	2-CHLOROPROPENE	5.00E-003 I				Y	3.0E+001 N	1.8E+001 N	0.9E+000 N	5.1E+003 N	3.9E+002 N			
O-Chloropropene	75296	O-CHLOROPROPENE			2.90E-002 H		Y	2.1E-002 N	1.1E-002 N				6.6E-002	1.3E+000 N	
Chlorpyrifos	95498	CHLORPYRIFOS	2.00E-002 I				Y	1.2E-002 N	7.3E-001 N	2.7E+001 N	2.0E+004 N	1.6E+003 N	8.5E-002	1.3E+000 N	
Chlorpyrifos-Methyl	2921882	CHLORPYRIFOS-METHYL	3.00E-003 I					1.1E-002 N	1.1E+001 N	4.1E+000 N	3.1E+003 N	2.3E+002 N	3.2E+000	6.3E+001 N	
Chromium III	5598130	CHROMIUM III	1.00E-002 H					3.7E-002 N	3.7E-001 N	1.4E-001 N	1.0E+004 N	7.8E+002 N			
Chromium VI	16065831	CHROMIUM VI	1.30E-003 I					5.5E+004 N	5.5E-003 N	2.0E-003 N	1.5E+008 N	1.2E+005 N	9.9E+007	2.0E+009 N	
Cobalt	18540298	COBALT	3.00E-003 I		4.10E+001 I		Y	1.1E-002 N	1.5E-004 C	4.1E+000 N	3.1E+003 N	2.3E+002 N	2.1E+000	4.2E+001 N	

Chemical	CAS	RIDo mg/kg/d	CSFo 1/mg/kg/d	RIDi mg/kg/d	CSFi 1/mg/kg/d	VOC	Risk-based concentrations					Region III SSLs				
							Tap water ug/l	Ambient air ug/m3	Fish mg/kg	Soil Industrial mg/kg	Residential mg/kg	Soil for groundwater migration mg/kg	DAF 1 mg/kg	DAF 20 mg/kg		
							Base C = Carcinogenic effects N = Noncarcinogenic effects I = RBC at H of 0.1 < RBC-C, see Alternate RBCs II = See Alternate RBCs									
COKE OVEN EMISSIONS (COAL TAR)	8007452					2.2 I										
COPPER	7440508	4.00E-002 H					1.5E+003 N	1.5E+002 N	5.4E+001 N	4.1E+004 N	3.1E+003 N	5.3E+002	1.1E+004 N			
CUMENE	98828	1.00E-001 I				Y	6.6E+002 N	4.0E+002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N	3.2E+000	6.4E+001 N			
CYANIDE (FREE)	57125	2.00E-002 I					7.3E+002 N	7.3E+001 N	2.7E+001 N	2.0E+004 N	1.6E+003 N	7.4E+000	1.5E+002 N			
CALCIUM CYANIDE	592016	4E-002 I					1.5E+003 N	1.5E+002 N	5.4E+001 N	4.1E+004 N	3.1E+003 N					
COPPER CYANIDE	544923	5.00E-003 I					1.8E+002 N	1.8E+001 N	8.8E+000 N	5.1E+003 N	3.9E+002 N					
CYANAZINE	21725462	2.00E-003 H					8.0E+002 C	7.5E+003 C	3.8E+003 C	3.4E+000 C	7.6E+001 C	2.6E+005	5.3E+004 C			
CYANOGEN	480195	4.00E-002 I				Y	2.4E+002 N	1.5E+002 N	5.4E+001 N	4.1E+004 N	3.1E+003 N					
CYANOGEN BROMIDE	506883	9.00E-002 I					3.3E+003 N	3.3E+002 N	1.2E+002 N	9.2E+004 N	7.0E+003 N					
CYANOGEN CHLORIDE	508774	5.00E-002 I					1.8E+003 N	1.8E+002 N	8.8E+001 N	5.1E+004 N	3.9E+003 N					
HYDROGEN CYANIDE	74908	2.00E-002 I				Y	6.2E+000 N	3.1E+000 N	2.7E+001 N	2.0E+004 N	1.6E+003 N	1.1E+001	2.2E+000 N			
POTASSIUM SILVER CYANIDE	151508	5.00E-002 I					1.8E+003 N	1.8E+002 N	8.8E+001 N	5.1E+004 N	3.9E+003 N					
SILVER CYANIDE	506816	2.00E-001 I					7.3E+003 N	7.3E+002 N	2.7E+002 N	2.0E+005 N	1.6E+004 N	3.1E+001	6.2E+002 N			
SODIUM CYANIDE	506849	1.00E-001 I					3.7E+003 N	3.7E+002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N					
THIOCYANATE	143339	4.00E-002 I					1.5E+003 N	1.5E+002 N	5.4E+001 N	4.1E+004 N	3.1E+003 N					
ZINC CYANIDE	557211	1.00E-004 E					3.7E+000 N	3.7E+001 N	1.4E+001 N	1.0E+002 N	7.8E+000 N	1.1E+002	2.3E+003 N			
CYCLOHEXANE	110827	5.00E-002 I				Y	1.2E+004 N	6.2E+003 N	6.8E+001 N	5.1E+004 N	3.9E+003 N					
CYCLOHEXANONE	109941	5.00E-000 I					1.8E+005 N	1.8E+004 N	8.8E+003 N	5.1E+008 N	3.9E+005 N	6.1E+001	1.2E+003 N			
CYHALOTHRINKARATE	6808458	5.00E-003 I					1.8E+002 N	1.8E+001 N	8.8E+000 N	5.1E+003 N	3.9E+002 N					
CYPERMETHRIN	52315078	1.00E-002 I					3.7E+002 N	3.7E+001 N	1.4E+001 N	1.0E+004 N	7.8E+002 N					
DACTHAL	1881321	1.00E-002 I					3.7E+002 N	3.7E+001 N	1.4E+001 N	1.0E+004 N	7.8E+002 N					
DALAPON	75990	3.00E-002 I					1.1E+003 N	1.1E+002 N	4.1E+001 N	3.1E+004 N	2.3E+003 N	3.5E+001	7.1E+000 N			
DDD	72548						2.8E+001 C	2.8E+002 C	1.3E+002 C	1.2E+001 C	2.7E+000 C	5.6E+001	1.5E+001 C			
DDE	72559						2.0E+001 C	1.8E+002 C	9.3E+003 C	8.4E+000 C	1.8E+000 C	1.8E+000	1.5E+001 C			
DDT	50283	5.00E-004 I					2.0E+001 C	1.8E+002 C	9.3E+003 C	8.4E+000 C	1.8E+000 C	5.8E+002	1.2E+000 C			
DIBENZOFURAN	333415	9.00E-004 H					3.3E+001 N	3.3E+000 N	1.2E+000 N	9.2E+002 N	7.0E+001 N	2.1E+002	4.3E+001 N			
1,4-DIBROMOBENZENE	132649	2.00E-003 E				Y	1.2E+001 N	7.3E+000 N	2.7E+000 N	2.0E+003 N	1.8E+002 N	1.9E+001	3.8E+000 N			
DIBROMOCHLOROMETHANE	108376	1.00E-002 I					3.7E+002 N	3.7E+001 N	1.4E+001 N	1.0E+004 N	7.8E+002 N	4.1E+005	8.3E+004 C			
1,2-DIBROMO-3-CHLOROPROPANE	124481	1.40E+000 H					4.7E+002 C	2.1E+001 N	2.3E+003 C	2.0E+000 C	4.6E+001 C	4.4E+005	8.7E+004 C			
1,2-DIBROMOETHANE	98128	8.50E+001 I					7.5E+004 C	8.2E+003 C	3.7E+005 C	3.4E+002 C	7.5E+003 C	4.3E+007	8.5E+006 C			
DIBUTYLPHthalATE	106934						3.7E+003 N	3.7E+002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N	2.5E+002	5.0E+003 N			
DICAMBA	84742	1.00E-001 I					1.1E+003 N	1.1E+002 N	4.1E+001 N	3.1E+004 N	2.3E+003 N	2.2E+001	4.5E+000 N			
1,2-DICHLOROBENZENE	918009	3.00E-002 I					2.7E+002 N	1.5E+002 N	1.2E+002 N	9.2E+004 N	7.0E+003 N	2.3E+001	4.6E+000 N			
1,3-DICHLOROBENZENE	95501	9.00E-002 I				Y	1.8E+002 N	1.1E+002 N	4.1E+001 N	3.1E+004 N	2.3E+003 N	1.5E+001	2.9E+000 N			
1,4-DICHLOROBENZENE	541731	3.00E-002 E					4.7E+001 C	2.8E+001 C	1.3E+001 C	1.2E+002 C	2.7E+001 C	3.6E+004	7.1E+003 C			
3,3'-DICHLOROBENZIDINE	108467	3.00E-002 E				Y	1.3E+003 C	6.7E+004 C	7.0E+003 C	6.4E+000 C	1.4E+000 C	2.5E+004	4.9E+003 C			
1,4-DICHLORO-2-BUTENE	91841	4.50E-001 I					1.3E+003 C	6.7E+004 C	7.0E+003 C	6.4E+000 C	1.4E+000 C	4.0E+007	8.0E+006 C			
DICHLORODIFLUOROMETHANE	764410						3.5E+002 N	1.8E+002 N	2.7E+002 N	2.0E+005 N	1.6E+004 N	5.5E+001	1.1E+001 N			
1,1-DICHLOROETHANE	75718	2.00E-001 I				Y	8.0E+002 N	5.1E+002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N	2.3E+001	4.5E+000 N			
1,2-DICHLOROETHANE	75343	1.00E-001 H				Y	1.2E+001 C	8.9E+002 C	3.9E+002 C	3.1E+001 C	7.0E+000 C	5.2E+005	1.0E+003 C			
1,1-DICHLOROETHENE	107082	2.00E-002 E					3.5E+002 N	2.2E+002 N	8.8E+001 N	5.1E+004 N	3.9E+003 N	1.5E+001	2.9E+000 N			
CIS-1,2-DICHLOROETHENE	75334	5.00E-002 I				Y	6.1E+001 N	3.7E+001 N	1.4E+001 N	1.0E+004 N	7.8E+002 N	1.7E+002	3.5E+001 N			
TRANS-1,2-DICHLOROETHENE	156892	1.00E-002 P				Y	1.2E+002 N	7.3E+001 N	2.7E+001 N	2.0E+004 N	1.6E+003 N	4.1E+002	8.2E+001 N			

Chemical	CAS	RfD mg/kgd	CSF ₀ 1/mg/kgd	RfD ₁ mg/kgd	CSF ₁ 1/mg/kgd	VOC	Risk-based concentrations					Region III SSLs		
							Top water ug/l	Ambient air ug/m3	Fish mg/kg	Industrial mg/kg	Residential mg/kg	DAF 1 mg/kg	DAF 20 mg/kg	Soil for groundwater migration
TOTAL 1,2-DICHLOROETHENE	640590	9.00E-003 H				Y	5.5E-001 N	3.3E-001 N	1.2E-001 N	9.2E-003 N	7.0E-002 N	1.9E-002	3.7E-001 N	
2,4-DICHLOROPHENOL	120832	3.00E-003 I					1.1E-002 N	1.1E-001 N	4.1E-000 N	3.1E-003 N	2.3E-002 N	6.0E-002	1.2E-000 N	
2,4-DICHLOROPHENOL	94757	1.00E-002 I					3.7E-002 N	3.7E-001 N	1.4E-001 N	1.0E-004 N	7.8E-002 N	4.5E-001	9.0E-000 N	
4-(2,4-DICHLOROPHENOXY)BUTYRIC ACID	94826	8E-003 I					2.9E-002 N	2.9E-001 N	1.1E-001 N	8.2E-003 N	6.3E-002 N			
1,2-DICHLOROPROPANE	78875					Y	1.6E-001 C	9.2E-002 C	4.8E-002 C	4.2E-001 C	9.4E-000 C			
1,3-DICHLOROPROPANE	142289	2.00E-002 P				Y	1.2E-002 N	7.3E-001 N	2.7E-001 N	2.0E-003 N	1.6E-003 N		2.1E-003 C	
2,3-DICHLOROPROPANOL	618239	3.00E-003 I					1.1E-002 N	1.1E-001 N	4.1E-000 N	3.1E-003 N	2.3E-002 N			
1,3-DICHLOROPROPENE	542756	3.00E-002 I				Y	4.4E-001 C	8.3E-001 C	3.2E-002 C	2.9E-001 C	6.4E-000 C		3.1E-003 C	
DICHLOROVOS	82737	5E-004 I					2.3E-001 C	2.3E-002 C	1.1E-002 C	9.9E-000 C	2.2E-000 C	5.5E-005	1.1E-003 C	
DICYCLOPENTADIENE	77736	3E-002 H				Y	4.4E-001 N	2.2E-001 N	4.1E-001 N	3.1E-004 N	2.3E-003 N			
DIELDRIN	60571	5.00E-005 I					4.2E-003 C	3.9E-004 C	2.0E-004 C	1.8E-001 C	4.0E-002 C	1.1E-004	2.2E-003 C	
DIESEL EMISSIONS								5.1E-000 N						
DIETHYLPHthalate	84682	8.00E-001 I					2.9E-004 N	2.9E-003 N	1.1E-003 N	8.2E-005 N	6.3E-004 N	2.3E-001	4.5E-002 N	
DIETHYLENE GLYCOL MONOBUTYL ETHER	112345	1.00E-002 P					3.7E-002 N	2.1E-001 N	1.4E-001 N	1.0E-004 N	7.8E-002 N			
DIETHYLENE GLYCOL MONOETHYL ETHER	111900	6.00E-002 P					2.2E-003 N	3.1E-000 N	8.1E-001 N	6.1E-004 N	4.7E-003 N			
DI(2-ETHYLHEXYL)ADIPATE	102231	8.00E-001 I					5.6E-001 C	5.2E-000 C	2.8E-000 C	2.4E-003 C	5.3E-002 C			
DIETHYLSILBESTROL	59531						1.4E-003 C	1.3E-006 C	8.7E-007 C	6.1E-004 C	1.4E-004 C			
DIFENOCUAT (AVENGE)	43222468	8.00E-002 I					2.9E-003 N	2.9E-002 N	1.1E-002 N	8.2E-004 N	6.3E-003 N			
1,1-DIFLOROETHANE	75376					Y	8.0E-004 N	4.0E-004 N	1.1E-002 N	8.2E-004 N	6.3E-003 N			
DISOPROPYL METHYLPHOSPHONATE (DIMP)	1445746	8.00E-002 I					4.8E-000 C	2.9E-002 N	1.1E-002 N	2.0E-002 C	4.0E-001 C			
3,3-DIMETHOXYBENZIDINE	119904						1.2E-001 C	1.1E-002 C	5.4E-003 C	4.9E-000 C	1.1E-000 C			
2,4-DIMETHYLANILINE HYDROCHLORIDE	21439664						8.9E-002 C	8.3E-003 C	4.2E-003 C	3.9E-000 C	8.5E-001 C			
2,4-DIMETHYLANILINE	85681						7.3E-001 N	7.3E-000 N	2.7E-000 N	2.0E-003 N	1.6E-002 N			
N,N-DIMETHYLANILINE	121697	2.00E-003 I					2.9E-002 C	2.7E-003 C	1.4E-003 C	1.2E-000 C	2.8E-001 C			
3,3-DIMETHYLBENZIDINE	119937						7.3E-002 N	7.3E-001 N	2.7E-001 N	2.0E-004 N	1.6E-003 N	3.4E-001	6.7E-000 N	
2,4-DIMETHYLPHENOL	105679	2.00E-002 I					2.2E-001 N	2.2E-000 N	8.1E-001 N	6.1E-002 N	4.7E-001 N			
2,6-DIMETHYLPHENOL	576261	8.00E-004 I					3.7E-001 N	3.7E-000 N	1.4E-000 N	1.0E-003 N	7.8E-001 N			
3,4-DIMETHYLPHENOL	95659	1.00E-003 I					3.7E-001 N	3.7E-000 N	1.4E-000 N	1.0E-003 N	7.8E-001 N			
DIMETHYLPHthalate	131113	1.00E-001 W					3.7E-005 N	3.7E-004 N	1.4E-004 N	1.0E-007 N	7.8E-003 N			
1,2-DINITROBENZENE	528290	1.00E-004 P					3.7E-000 N	3.7E-001 N	1.4E-001 N	1.0E-002 N	7.8E-000 N			
1,3-DINITROBENZENE	96650	1.00E-004 I					3.7E-000 N	3.7E-001 N	1.4E-001 N	1.0E-002 N	7.8E-000 N			
1,4-DINITROBENZENE	100254	1.00E-004 P					3.7E-000 N	3.7E-001 N	1.4E-001 N	1.0E-002 N	7.8E-000 N			
4,8-DINITRO-O-CYCLOHEXYL PHENOL	131895	2.00E-003 I					7.3E-001 N	7.3E-000 N	2.7E-000 N	2.0E-003 N	1.6E-002 N			
4,8-DINITRO-2-METHYLPHENOL	534521	1.00E-004 P					3.7E-000 N	3.7E-001 N	1.4E-001 N	1.0E-002 N	7.8E-000 N			
2,4-DINITROPHENOL	51285	2.00E-003 I					3.7E-000 N	3.7E-001 N	1.4E-001 N	1.0E-002 N	7.8E-000 N			
DINITROTOLUENE MIX							9.9E-002 C	9.2E-003 C	4.8E-003 C	4.2E-000 C	9.4E-001 C			
2,4-DINITROTOLUENE	121142	2.00E-003 I					7.3E-001 N	7.3E-000 N	2.7E-000 N	2.0E-003 N	1.6E-002 N	2.9E-002	5.7E-001 N	
2,6-DINITROTOLUENE	605202	1.00E-003 H					3.7E-001 N	3.7E-000 N	1.4E-000 N	1.0E-003 N	7.8E-001 N	1.2E-002	2.5E-001 N	
DINOSB	88857	1.00E-003 I					3.7E-001 N	3.7E-000 N	1.4E-000 N	1.0E-003 N	7.8E-001 N	8.7E-003	1.7E-001 N	
DIOCTYLPHthalate	117840	4.00E-002 P					1.5E-003 N	1.5E-002 N	5.4E-001 N	4.1E-004 N	3.1E-003 N	2.4E-005	4.9E-006 N	
1,4-DIOXANE	123911						6.1E-000 C	5.7E-001 C	2.9E-001 C	2.8E-002 C	5.8E-001 C	1.3E-003	2.6E-002 C	
DIPHENYLAMINE	122394	2.50E-002 I					9.1E-002 C	9.1E-003 C	3.4E-001 C	2.8E-004 N	2.0E-003 N	1.3E-000	2.5E-003 C	
1,2-DIPHENYLHYDRAZINE	122667						8.4E-002 C	7.8E-003 C	3.9E-003 C	3.8E-000 C	8.0E-001 C	1.3E-004	2.5E-003 C	
DIOQUAT	85007	2.20E-003 I					8.0E-001 N	8.0E-000 N	3.0E-000 N	2.2E-003 N	1.7E-002 N	1.7E-002	3.3E-001 N	
DISULFOTON	298044	4.00E-005 I					1.5E-000 N	1.5E-001 N	5.4E-002 N	4.1E-001 N	3.1E-000 N	3.2E-003	6.4E-002 N	

Chemical	CAS	RID ₀ mg/kg/d	CSF ₀ 1/mg/kg/d	RID ₁ mg/kg/d	CSF ₁ 1/mg/kg/d	VOC	Risk-based concentrations					Region III SSLs	
							Tap water ug/l	Ambient air ug/m ³	Flu mg/kg	Soil mg/kg	Residential mg/kg	Soil for groundwater migration mg/kg	DAF 1 mg/kg
1,4-DITHIANE	505293	1.0E-002					3.7E-002 N	3.7E-001 N	1.4E-001 N	1.0E-004 N	7.8E-002 N	5.8E-002	1.2E+000 N
DIURON	330541	2.0E-003					7.3E-001 N	7.3E-000 N	2.7E+000 N	2.0E-003 N	1.8E-003 N	9.8E-001	2.0E+001 N
ENDOSULFAN	115297	8.0E-003					2.2E-001 N	2.2E-001 N	8.1E-000 N	6.1E-003 N	4.7E-002 N	2.7E-001	5.4E+000 N
ENDRIN	72208	3.0E-004					1.1E-001 N	1.1E-000 N	4.1E-001 N	3.1E-002 N	2.3E-001 N	4.2E-004	8.4E+003 N
EPICHLOROHYDRIN	106598	2.0E-003				Y	2.0E-000 N	1.0E-000 N	3.2E-001 C	2.8E-002 C	6.5E-001 C	3.2E-001	6.4E+000 N
ETHION	583122	5.0E-004					1.8E-001 N	1.8E-000 N	6.8E-001 N	5.1E-002 N	3.9E-001 N	3.3E-000	6.5E+001 N
2-ETHOXYETHANOL	110805	4.0E-001					1.5E-004 N	2.1E-002 N	5.4E-002 N	4.1E-005 N	3.1E+004 N	3.3E-000	6.5E+001 N
ETHYL ACETATE	141786	9.0E-001				Y	5.5E-003 N	3.3E-003 N	1.2E-003 N	9.2E-005 N	7.0E-004 N	1.7E-000	3.5E+001 N
ETHYLBENZENE	100414	1.0E-001				Y	1.3E-003 N	1.1E-003 N	1.4E-002 N	1.0E-005 N	7.8E-003 N	7.5E-001	1.5E+001 N
ETHYLENE DIAMINE	107153	9.0E-002					3.3E-003 N	3.3E-002 N	1.2E-002 N	9.2E-004 N	7.0E-003 N	1.5E-001	3.0E+002 N
ETHYLENE GLYCOL	107211	2.0E+000					7.3E-004 N	7.3E-003 N	2.7E-003 N	2.0E-006 N	1.8E-005 N	4.8E-006	9.5E+005 C
ETHYLENE GLYCOL MONOBUTYL ETHER	111782	5.0E-001					1.8E-004 N	1.4E-004 N	8.0E-002 N	5.1E-005 N	3.9E-004 N	4.8E-006	9.5E+005 C
ETHYLENE THIOUREA	75218	1.0E+000				Y	2.3E-002 C	1.8E-002 C	3.2E-003 C	2.9E-000 C	6.4E-001 C	4.2E-001	8.5E+000 N
ETHYL ETHER	96457	8.0E-005				Y	6.1E-001 C	5.7E-002 C	2.9E-002 C	2.8E-001 C	5.8E-000 C	1.0E+000	2.1E+001 N
ETHYL METHACRYLATE	60297	2.0E-001				Y	1.2E-003 N	7.3E-002 N	2.7E-002 N	2.0E-005 N	1.6E-004 N	7.8E-003	1.6E+001 N
FENAMIPHOS	97532	9.0E-002				Y	5.5E-002 N	3.3E-002 N	1.2E-002 N	9.2E-004 N	7.0E-003 N	1.0E+000	2.1E+001 N
FLUOMETURON	2224826	2.5E-004					9.1E-000 N	9.1E-001 N	3.4E-001 N	2.6E-002 N	2.0E-001 N	7.8E-003	1.6E+001 N
FLUORINE	216472	1.3E-002					4.7E-002 N	4.7E-001 N	1.6E-001 N	1.3E-004 N	1.0E-003 N	1.5E-003	3.0E+002 N
FOMESAFEN	7182414	6.0E-002					2.2E-003 N	2.2E-002 N	8.1E-001 N	6.1E-004 N	4.7E-003 N	1.8E-001	3.5E+000 N
FONOFOS	7217820	1.9E-001					3.5E-001 C	3.3E-002 C	1.7E-002 C	1.5E-001 C	3.4E-000 C	1.5E-003	3.0E+002 N
FORMALDEHYDE	50000	2.0E-001					7.3E-003 N	7.3E-000 N	2.7E-003 N	2.0E-003 N	1.6E-002 N	1.8E-001	3.5E+000 N
FORMIC ACID	84186	2.0E+000					7.3E-004 N	3.1E-000 N	2.7E-003 N	2.0E-008 N	1.8E-005 N	1.5E-003	3.0E+001 N
FURAN	110009	1.0E-003				Y	6.1E-000 N	3.7E-000 N	1.4E-000 N	1.0E-003 N	7.8E-001 N	1.5E-003	3.0E+002 N
FURAZOLIDONE	87458	3.8E+000					1.8E-002 C	1.8E-003 C	8.3E-004 C	7.5E-001 C	1.7E-001 C	2.3E-002	4.6E-001 N
FURFURAL	98011	3.0E-003					1.1E-002 N	3.7E-001 N	4.1E-000 N	3.1E-003 N	2.3E-002 N	2.6E-003	5.2E+002 N
GLYCIDALDEHYDE	765344	4.0E-004					1.5E-001 N	1.1E-000 N	5.4E-001 N	4.1E-002 N	3.1E-001 N	4.2E-002	8.4E-001 C
GLYPHOSATE	1071638	1.0E-001					3.7E-003 N	3.7E-002 N	1.4E-002 N	1.0E-005 N	7.8E-003 N	1.2E-003	2.5E-002 C
HEPTACHLOR	76448	5.0E-004					1.5E-002 C	1.4E-003 C	7.0E-004 C	6.4E-001 C	1.4E-001 C	2.6E-003	5.2E+002 N
HEPTACHLOR EPOXIDE	1024573	1.3E-005					7.4E-003 C	6.9E-004 C	3.5E-004 C	3.1E-001 C	7.0E-002 C	4.2E-002	8.4E-001 C
HEXABROMOBENZENE	87821	2.0E-003					7.3E-001 N	7.3E-000 N	2.7E-000 N	2.0E-003 N	1.8E-002 N	2.6E-003	5.2E+002 N
HEXACHLOROBENZENE	118741	8.0E-004					4.2E-002 C	3.9E-003 C	2.0E-003 C	1.8E-000 C	4.0E-001 C	9.2E-002	1.8E+000 C
HEXACHLOROBUTADIENE	87893	2.0E-004					8.6E-001 C	8.0E-002 C	4.0E-002 C	3.7E-001 C	8.2E-000 C	4.5E-005	8.9E-004 C
ALPHA-HCH	318946	6.30E+000					1.1E-002 C	9.8E-004 C	5.0E-004 C	4.5E-001 C	1.0E-001 C	1.6E-004	3.1E-003 C
BETA-HCH	318957	1.80E+000					5.2E-002 C	4.8E-003 C	2.4E-003 C	2.2E-000 C	4.9E-001 C	2.2E-004	4.3E-003 C
GAMMA-HCH (LINDANE)	58999	1.30E+000					3.7E-002 C	3.5E-003 C	1.8E-003 C	1.8E-000 C	3.5E-001 C	8.8E-001	1.8E+003 N
TECHNICAL HCH	608731	1.80E+000					2.2E-002 N	2.1E-001 N	8.1E-000 N	6.1E-003 N	4.7E-002 N	1.8E-002	3.8E-001 C
HEXACHLOROCYCLOPENTADIENE	77474	6.0E-003					1.1E-005 C	1.4E-006 C	5.1E-007 C	4.8E-004 C	1.0E-004 C	1.8E-002	3.8E-001 C
HEXACHLORODIBENZODIOXIN MIX	19408743	6.20E+003					4.8E-000 C	4.5E-001 C	2.3E-001 C	2.0E-002 C	2.3E-001 N	1.0E-002	2.0E+003 N
HEXACHLOROTHANE	67721	1.0E-003					1.1E-001 N	1.1E-000 N	4.1E-001 N	3.1E-002 N	2.3E-001 N	8.2E-001	1.8E+001 N
HEXACHLOROPHENE	70304	3.0E-004					4.2E-002 N	2.1E-002 N	1.5E-004 N	1.1E-007 N	8.6E-005 N	8.2E-001	1.8E+001 N
1,6-HEXAMETHYLENE DIISOCYANATE	822060	2.90E-008				Y	4.2E-002 N	2.1E-002 N	1.5E-004 N	1.1E-007 N	8.6E-005 N	8.2E-001	1.8E+001 N
HEXANE	110543	1.10E+001					1.2E-003 N	1.2E-002 N	4.5E-001 N	3.4E-004 N	2.6E-003 N	1.0E-002	2.0E+003 N
HEXAZINONE	51235042	3.30E-002					1.8E-003 N	1.8E-002 N	8.8E-001 N	5.1E-004 N	3.9E-003 N	8.2E-001	1.8E+001 N
HMX	2891410	5.0E-002					1.8E-003 N	1.8E-002 N	8.8E-001 N	5.1E-004 N	3.9E-003 N	8.2E-001	1.8E+001 N

Chemical	CAS	RfD _o mg/kg/d	CSF _o 1/mg/kg/d	RfD _i mg/kg/d	CSF _i 1/mg/kg/d	VOC µg/l	Tap water µg/m ³	Ambient air µg/m ³	Risk-based concentrations			Region III SSLs		
									Fish mg/kg	Soil mg/kg	Residential mg/kg	Soil for groundwater migration DAF 1 mg/kg	DAF 20 mg/kg	
HYDRAZINE	302012						2.2E-002 C	3.7E-004 C	1.1E-003 C	9.5E-001 C	2.1E-001 C			
HYDROGEN CHLORIDE	7647010						1.1E-002 N	2.1E-001 N	4.1E-000 N	3.1E-003 N	2.3E-002 N			
HYDROGEN SULFIDE	7783064						1.2E-000 C	1.1E-001 C	5.6E-002 C	5.1E-001 C	1.1E-001 C			
IRON	7439896						1.1E-004 N	1.1E-003 N	4.1E-002 N	3.1E-005 N	2.3E-004 N			
ISOBUTANOL	76831						1.0E-003 N	1.1E-003 N	4.1E-002 N	3.1E-005 N	2.3E-004 N			
ISOPHORONE	76591						1.0E-003 N	1.1E-003 N	4.1E-002 N	3.1E-005 N	2.3E-004 N			
ISOPROPYLAL	33820530						1.0E-003 N	1.1E-003 N	4.1E-002 N	3.1E-005 N	2.3E-004 N			
ISOPROPYL METHYL PHOSPHONIC ACID	1832548						5.9E-002 N	5.9E-001 N	2.0E-001 N	1.5E-004 N	1.2E-003 N			
TETRAETHYLEAD	78002						3.7E-003 N	3.7E-004 N	1.4E-004 N	1.0E-001 N	7.8E-003 N			
KEPONE	143500						8.4E-003 C	7.8E-004 C	3.9E-004 C	3.6E-001 C	8.0E-002 C			
LITHIUM	7439932						7.3E-002 N	7.3E-001 N	2.7E-001 N	2.0E-004 N	1.6E-003 N			
MALATHION	121755						7.3E-003 N	3.7E-002 N	1.4E-002 N	1.0E-005 N	7.8E-003 N			
MALEIC ANHYDRIDE	108318						7.3E-002 N	5.2E-002 N	2.7E-002 N	2.0E-004 N	1.6E-003 N			
MANGANESE-NONFOOD	7439965						5.1E-003 N	5.2E-002 N	1.9E-002 N	1.4E-005 N	1.1E-004 N			
MANGANESE-FOOD	7439965						3.3E-000 N	3.3E-001 N	1.2E-001 N	9.2E-001 N	7.0E-002 N			
METHOPHOLAN	950107						1.1E-003 N	1.1E-002 N	4.1E-001 N	3.1E-004 N	2.3E-003 N			
METOPROLOL	24307264						1.1E-003 N	1.1E-002 N	4.1E-001 N	3.1E-004 N	2.3E-003 N			
MERCURIC CHLORIDE	7487947						1.1E-003 N	1.1E-002 N	4.1E-001 N	3.1E-004 N	2.3E-003 N			
MERCURY (INORGANIC)	7439976						3.7E-000 N	3.7E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHYLMERCURY	22867928						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHACRYLONITRILE	126987						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHANOL	67581						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHATHION	950378						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHOXYCHLOR	72435						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHYL ACETATE	78208						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHYL ACRYLATE	96333						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
2-METHYLANILINE	95534						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
4-2-METHYL-4-CHLOROPHENOXY BUTYRIC ACID	94815						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
2-METHYL-4-CHLOROPHENOXYACETIC ACID (MCPA)	94746						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
2-2-METHYL-4-CHLOROPHENOXYPROPIONIC ACID (MCPP)	93852						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHYLENE CHLORIDE	74853						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHYLENE BROMIDE	75092						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
4,4-METHYLENE BIS(2-CHLORANILINE)	101144						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
4,4-METHYLENE BIS(N,N-DIMETHYL)ANILINE	101811						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
4,4-METHYLENEDIPHENYL ISOCYANATE	101693						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHYL ETHYL KETONE (2-BUTANONE)	78333						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	108107						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHYL METHACRYLATE	80026						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
2-METHYL-5-NITROANILINE	98558						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
METHYL PARATHION	298000						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
2-METHYLPHENOL	95487						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
3-METHYLPHENOL	108394						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			
4-METHYLPHENOL	108445						1.0E-000 N	7.3E-001 N	1.4E-001 N	1.0E-002 N	7.8E-003 N			

Source: I = IRIS H = HEAST A = HEAST Alternates C = Withdrawn from IRIS or HEAST E = EPA-NCEA provisional value O = other P = EPA Provisional peer-reviewed value													Region III SSLs				
Chemical	CAS	RIDo mg/kg	CSFo 1/mg/kg	RIDi mg/kg	CSFi 1/mg/kg	VOC	Risk-based concentrations					Soil for groundwater migration					
							Tap water µg/l	Ambient air µg/m ³	Fish mg/kg	Soil Industrial mg/kg	Residential mg/kg	DAF 1 mg/kg	DAF 20 mg/kg				
METHYLSTYRENE MIX	25011154	8.00E-003 A		1.00E-002 A		Y	5.5E-001 N	3.7E+001 N	8.1E+000 N	8.1E+003 N	4.7E+002 N	5.1E-002	1.0E+000 N				
ALPHA-METHYLSTYRENE	98039	7.00E-002 A				Y	4.3E+002 N	2.8E+002 N	9.3E+001 N	7.2E+004 N	5.5E+003 N	4.0E-001	7.9E+000 N				
METHYL TERT-BUTYL ETHER	1634044		4.00E-003 O	8.57E-001 I		Y	2.6E+000 C	1.6E+000 C	7.9E-001 C	7.2E+001 C	1.6E+002 C	5.9E-004	1.2E+002 C				
METOLACHLOR (DUAL)	51218452	1.50E-001 I					5.5E+003 N	5.5E+002 N	2.0E+002 N	1.5E+005 N	1.2E+004 N						
MIREX	2383855	2.00E-004 I					7.3E+000 N	7.3E-001 N	2.7E+001 N	2.0E+002 N	1.6E+001 N						
MOLYBDENUM	7439987	5E-003 I					1.8E+002 N	1.8E-001 N	6.8E+000 N	5.1E+003 N	3.9E+002 N						
MONOCHLORAMINE	1059903	1E-001 I		1.00E-001 H			3.7E+003 N	3.7E+002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N						
NALED	300785	2E-003 I			8.4E-001 I		7.3E+001 N	7.3E+000 N	2.7E+000 N	2.0E+003 N	1.6E+002 N						
NICKEL	7440020	2.00E-002 I					7.3E+002 N	7.3E+001 N	2.7E+001 N	2.0E+004 N	1.6E+003 N						
NITRATE	14797558	1.60E+000 I					5.8E+004 N	5.8E+003 N	2.2E+003 N	1.8E+008 N	1.3E+005 N						
NITRITE	14797850	1.00E-001 I					3.7E+003 N	3.7E+002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N						
2-NITROANILINE	88744	3.00E-003 P		3.00E-005 P			1.1E+002 N	1.1E-001 N	4.1E+000 N	3.1E+003 N	2.3E+002 N						
3-NITROANILINE	98092	3.00E-004 P		2.00E-002 P			3.3E+000 C	3.1E-001 C	1.4E+000 C	1.4E+002 C	2.3E+001 C						
4-NITROANILINE	100018	3.00E-003 P		2.00E-002 P			3.3E+000 C	3.1E-001 C	1.6E-001 C	1.4E+002 C	3.2E+001 C						
NITROBENZENE	98953	5.00E-004 I		6.00E-004 A		Y	3.5E+000 N	2.2E+000 N	8.8E+001 N	5.1E+002 N	3.9E+001 N						
NITROFURANTOIN	87209	7.00E-002 H					2.8E+003 N	2.8E+002 N	9.9E+001 N	7.2E+004 N	5.5E+003 N						
NITROFURAZONE	59870	1.50E+000 H					4.5E+002 C	4.2E-003 C	2.1E-003 C	1.9E+000 C	4.3E+001 C						
NITROGLYCERIN	55630	1.4E-002 E					4.8E+000 C	4.5E-001 C	2.3E-001 C	2.0E+002 C	4.6E+001 C						
2-NITROPROPANE	79469	5.40E+000 I		5.70E-003 I		Y	1.3E-003 C	6.7E-004 C	5.8E-004 C	5.3E-001 C	1.2E-001 C						
NITROSODI-N-BUTYLAMINE	924183	1.1E-003 I				Y	1.9E-003 C	1.1E-003 C	1.1E-003 C	1.0E+000 C	2.3E-001 C						
NITROSODIETHANOLAMINE	1116547	2.80E+000 I					2.4E-002 C	2.2E-003 C	1.1E-003 C	1.0E+000 C	2.3E-001 C						
NITROSODIETHYLAMINE	55185	1.50E+002 I		1.50E-002 I			4.5E-004 C	4.2E-005 C	2.1E-005 C	1.9E-002 C	4.3E-003 C						
NITROSODIMETHYLAMINE	82759	8.00E-008 P		5.10E+001 I			1.3E-003 C	1.2E-004 C	8.2E-005 C	5.8E-002 C	1.3E-002 C						
NITROSODIPHENYLAMINE	86308	2.00E-002 P		4.90E-003 I			1.4E+001 C	1.3E+000 C	6.4E-001 C	5.8E+002 C	1.3E+002 C						
NITROSODIPROPYLAMINE	821847	7.00E+000 I		7.00E+000 I			9.6E-003 C	8.9E-004 C	4.5E-004 C	4.1E-001 C	9.1E-002 C						
NITROSODIETHYLENEUREA	759739	1.40E+002 H					4.8E-004 C	4.5E-005 C	2.3E-005 C	2.0E-002 C	4.6E-003 C						
NITROSODI-METHYLETHYLAMINE	10595958	2.20E+001 I					3.0E-003 C	2.8E-004 C	1.4E-004 C	1.3E-001 C	2.9E-002 C						
NITROSOPYRROLIDINE	930552	2.10E+000 I					3.2E-002 C	3.0E-003 C	1.5E-003 C	1.4E+000 C	3.0E-001 C						
M-NITROTOLUENE	90081	2.00E-002 P				Y	1.2E+002 N	7.3E+001 N	2.7E+001 N	2.0E+004 N	1.6E+003 N						
O-NITROTOLUENE	88722	1.00E-002 H		2.30E-001 P		Y	4.6E-002 C	2.7E-002 C	1.4E-002 C	1.2E+001 C	2.8E+000 C						
P-NITROTOLUENE	99990	1.00E-002 P		1.7E-002 P		Y	6.2E-001 C	3.7E-001 C	1.9E-001 C	1.7E+002 C	3.8E+001 C						
NITROTOLUENE	85509189	7.00E-004 I				Y	2.6E+001 N	2.8E+000 N	9.5E-001 N	7.2E+002 N	5.5E+001 N						
ORYZALIN	19044863	5.00E-002 I					1.8E+003 N	1.8E+002 N	8.8E+001 N	5.1E+004 N	3.9E+003 N						
OXADIAZON	19686309	5.00E-003 I					1.8E+002 N	1.8E+001 N	8.8E+000 N	5.1E+003 N	3.9E+002 N						
OXAMYL	23135220	2.50E-002 I					9.1E+002 N	9.1E+001 N	3.4E+001 N	2.8E+004 N	2.0E+003 N						
OXYFLUORFEN	42874033	3.00E-003 I					1.1E+002 N	1.1E+001 N	4.1E+000 N	3.1E+003 N	2.3E+002 N						
PARAQUAT DICHLORIDE	1910425	4.50E-003 I					1.6E+002 N	1.6E-001 N	8.1E+000 N	4.8E+003 N	3.5E+002 N						
PENTACHLOROBENZENE	606835	8.00E-004 I					2.9E+001 N	2.9E+000 N	1.1E+000 N	8.2E+002 N	6.3E+001 N						
PENTACHLORONITROBENZENE	82688	3.00E-003 I		2.90E-001 H			2.6E+001 C	2.4E-002 C	1.2E-002 C	1.1E+001 C	2.5E+000 C						
PENTACHLOROPHENOL	87865	3.00E-002 I		1.20E-001 I			5.5E-001 C	5.2E-002 C	2.0E-002 C	2.4E+001 C	5.3E+000 C						
PERMETHRIN	52045531	5.00E-002 I					1.8E+003 N	1.8E+002 N	8.8E+001 N	5.1E+004 N	3.9E+003 N						
PHENOL	106952	3.00E-001 I					1.1E+004 N	1.1E+003 N	4.1E+002 N	3.1E+005 N	2.3E+004 N						
M-PHENYLENEDIAMINE	108452	6.00E-003 I					2.2E+002 N	2.2E+001 N	8.1E+000 N	6.1E+003 N	4.7E+002 N						

Chemical	CAS	Region III RBCs										Region III SSLs	
		CSFo	RfDo	CSFo	RfDo	CSFi	VOC	Tap water	Ambient air	Fish	Soil	Residential	Soil for groundwater migration
O-PHENYLENEDIAMINE	95545			4.70E-002 H				1.4E+000 C	1.3E+001 C	6.7E+002 C	6.1E+001 C	1.4E+001 C	
P-PHENYLENEDIAMINE	106503		1.90E-001 H					6.9E+003 N	8.9E+002 N	2.6E+002 N	1.9E+005 N	1.3E+004 N	
2-PHENYLPHENOL	90437			1.90E-003 H				3.5E+001 C	3.1E+000 C	1.7E+000 C	1.5E+003 C	3.4E+002 C	
PHOSPHINE	7803512		3.00E-004 I			8.80E-005 I		1.1E+001 N	3.1E+001 N	4.1E+001 N	3.1E+002 N	2.3E+001 N	
PHOSPHORIC ACID	7664-382					2.90E-003 I			1.1E+001 N				
P-PHTHALIC ACID	7723140		2.00E-005 I					7.3E+004 N	7.3E+002 N	2.7E+002 N	2.0E+001 N	1.8E+000 N	
PHTHALIC ANHYDRIDE	100210		1.00E+000 H					7.3E+004 N	7.3E+003 N	1.4E+003 N	1.0E+005 N	7.8E+004 N	
POLYBROMINATED BIPHENYLS	85448		2.00E+000 I			3.40E-002 H		7.3E+004 N	1.3E+002 N	2.7E+003 N	2.0E+008 N	1.8E+005 N	
POLYCHLORINATED BIPHENYLS			7.00E-006 H					7.3E+003 C	7.0E+004 C	3.5E+004 C	3.2E+001 C	7.2E+002 C	
AROCLOR-1016	1336383		7.00E-005 I	8.80E+000 H		2.00E+000 I		3.3E+002 C	3.1E+003 C	1.6E+003 C	1.4E+000 C	3.2E+001 C	
AROCLOR-1221	1287412		7.00E-005 I	7.00E-002 I		7.00E-002 I		9.6E+001 C	8.9E+002 C	4.5E+002 C	4.1E+001 C	5.5E+000 N	
AROCLOR-1232	1114165		2.00E+000 I	2.00E+000 I		2.00E+000 I		3.3E+002 C	3.1E+003 C	1.6E+003 C	1.4E+000 C	3.2E+001 C	
AROCLOR-1242	53469219		2.00E+000 I	2.00E+000 I		2.00E+000 I		3.3E+002 C	3.1E+003 C	1.6E+003 C	1.4E+000 C	3.2E+001 C	
AROCLOR-1248	12872266		2.00E+000 I	2.00E+000 I		2.00E+000 I		3.3E+002 C	3.1E+003 C	1.6E+003 C	1.4E+000 C	3.2E+001 C	
AROCLOR-1254	11097691		2.00E+000 I	2.00E+000 I		2.00E+000 I		3.3E+002 C	3.1E+003 C	1.6E+003 C	1.4E+000 C	3.2E+001 C	
AROCLOR-1260	11096825		2.00E+000 I	2.00E+000 I		2.00E+000 I		3.3E+002 C	3.1E+003 C	1.6E+003 C	1.4E+000 C	3.2E+001 C	
POLYCHLORINATED TERPHENYLS	61788336		4.50E+000 E					1.5E+002 C	1.4E+003 C	7.0E+004 C	6.4E+001 C	1.4E+001 C	
POLYNUCLEAR AROMATIC HYDROCARBONS:													
ACENAPHTHENE	83329		6.00E-002 I					3.7E+002 N	2.2E+002 N	8.1E+001 N	6.1E+004 N	4.7E+003 N	
ANTHRACENE	120127		3.00E-001 I					1.8E+003 N	1.1E+003 N	4.1E+002 N	3.1E+005 N	2.3E+004 N	
BENZ[A]ANTHRACENE	56553		7.30E-001 E					9.2E+002 C	8.6E+003 C	4.3E+003 C	3.9E+000 C	8.7E+001 C	
BENZ[B]FLUORANTHENE	205992		7.30E-001 E					9.2E+002 C	8.6E+003 C	4.3E+003 C	3.9E+000 C	8.7E+001 C	
BENZ[K]FLUORANTHENE	207089		7.30E-002 E					9.2E+001 C	8.6E+002 C	4.3E+002 C	3.9E+001 C	8.7E+000 C	
BENZO[APYRENE	50328		7.30E+000 I			3.10E+000 E		9.2E+003 C	2.0E+003 C	4.3E+004 C	3.9E+001 C	8.7E+002 C	
CARBAZOLE	86748		2.00E-002 H					9.2E+000 C	3.1E+001 C	1.6E+001 C	1.4E+002 C	3.2E+001 C	
CHRYSENE	218019		7.30E-003 E					9.2E+000 C	8.6E+001 C	4.3E+001 C	3.9E+002 C	8.7E+001 C	
DIBENZO[AH]ANTHRACENE	53703		7.30E+000 E					9.2E+003 C	8.6E+004 C	4.3E+004 C	3.9E+001 C	8.7E+002 C	
DIBENZOFURAN	132849		2.00E-003 E					1.2E+003 N	7.3E+000 N	2.7E+000 N	2.0E+003 N	1.6E+002 N	
FLUORANTHENE	208440		4.00E-002 I					1.5E+003 N	1.5E+002 N	5.4E+001 N	4.1E+004 N	3.1E+003 N	
FLUORENE	86737		4.00E-002 I					2.4E+002 N	1.5E+002 N	5.4E+001 N	4.1E+004 N	3.1E+003 N	
INDENO[1,2,3-C]DIPYRENE	193395		7.30E-001 E					9.2E+002 C	8.6E+003 C	4.3E+003 C	3.9E+000 C	8.7E+001 C	
**2-METHYLNAPHTHALENE	91576		4.00E-003 I					2.4E+001 N	1.5E+001 N	5.4E+000 N	4.1E+003 N	3.1E+002 N	
NAPHTHALENE	91203		2.00E-002 I			9.00E-004 I		6.5E+000 N	3.3E+000 N	2.7E+001 N	2.0E+004 N	1.6E+003 N	
PYRENE	129000		3.00E-002 I					1.8E+002 N	1.1E+002 N	4.1E+001 N	3.1E+004 N	2.3E+003 N	
PROMETON	1610160		1.50E-002 I					5.5E+002 N	5.5E+001 N	2.0E+001 N	1.5E+004 N	1.2E+003 N	
PROMETRYN	7287196		4.00E-003 I					1.8E+002 N	1.5E+001 N	5.4E+000 N	4.1E+003 N	3.1E+002 N	
PROPACHLOR	1918167		1.30E-002 I					4.7E+002 N	4.7E+001 N	1.8E+001 N	1.3E+004 N	1.0E+003 N	
PROPANIL	709968		5.00E-003 I					1.8E+002 N	1.8E+001 N	6.8E+000 N	5.1E+003 N	3.9E+002 N	
PROPARGITE	2312356		2.00E-002 I					7.3E+002 N	7.3E+001 N	2.7E+001 N	2.0E+004 N	1.6E+003 N	
**PROPYLENE GLYCOL	57556		5.00E-001 P			8.6E-004 P		1.8E+004 N	3.1E+000 N	6.8E+002 N	5.1E+005 N	3.9E+004 N	
PROPYLENE GLYCOL MONOETHYL ETHER	52125338		7.00E-001 H					2.6E+004 N	2.6E+003 N	8.5E+002 N	7.2E+005 N	5.5E+004 N	
PROPYLENE GLYCOL MONOMETHYL ETHER	107982		7.00E-001 H			5.70E-001 I		2.6E+004 N	2.1E+003 N	8.5E+002 N	7.2E+005 N	5.5E+004 N	
PURSUIT	81335775		2.50E-001 I					8.1E+003 N	9.1E+002 N	3.4E+002 N	2.8E+005 N	2.0E+004 N	
PYRIDINE	110861		1.00E-003 I					3.7E+001 N	3.7E+000 N	1.4E+000 N	1.0E+003 N	7.8E+001 N	

Chemical	CAS	RfDo mg/kg/d	CSFo 1mg/kg/d	RfDI mg/kg/d	CSFI 1mg/kg/d	VOC	Rat-based concentrations					Region III SSUs	
							Tap water µg/l	Ambient air µg/m ³	Fish mg/kg	Soil Industrial mg/kg	Residential mg/kg	Soil for groundwater migration DAF 1 mg/kg	DAF 20 mg/kg
QUINOLINE	91225	3.00E-003	3.00E-000				2.2E-002 C	2.1E-003 C	1.1E-003 C	9.5E-001 C	2.1E-001 C		
ROX	131824	3.00E-003	1.10E-001				6.1E-001 C	5.7E-002 C	2.9E-002 C	2.8E+001 C	5.8E+000 C		
RESMETHRIN	10453868	3.00E-002					1.1E-003 N	1.1E+002 N	4.1E+001 N	3.1E+004 N	2.3E+003 N		
ROXENOL	299843	5.00E-002					1.8E-003 N	1.8E+002 N	6.8E+001 N	5.1E+004 N	3.9E+003 N		
ROXENOL	83784	4.00E-003					1.5E-002 N	1.5E+001 N	5.4E+000 N	4.1E+003 N	3.1E+002 N		
SELENIUM	7783008	5.00E-003					1.8E-002 N	1.8E+001 N	8.8E+000 N	5.1E+003 N	3.9E+002 N		
SELENIUM	7782492	5.00E-003					1.8E-002 N	1.8E+001 N	8.8E+000 N	5.1E+003 N	3.9E+002 N	9.5E-001	1.9E+001 N
SILVER	7440224	5.00E-003					1.8E-002 N	1.8E+001 N	8.8E+000 N	5.1E+003 N	3.9E+002 N	1.6E-000	3.1E+001 N
SMALINE	122349	5.00E-003					5.6E-001 C	5.2E-002 C	2.6E-002 C	2.4E+001 C	5.3E+000 C	1.7E-004	3.3E-003 C
SODIUM AZIDE	26828228	4.00E-003					1.5E-002 N	1.5E+001 N	5.4E+000 N	4.1E+003 N	3.1E+002 N		
SODIUM DIETHYLTHIOCARBAMATE	148185	3.00E-002	2.70E-001 H				2.5E-001 C	2.3E-002 C	1.2E-002 C	1.1E-001 C	2.4E+000 C		
STRONTIUM, STABLE	7440246	8.00E-001					2.2E-004 N	2.2E+003 N	8.1E+002 N	6.1E+003 N	4.7E+004 N		
STRONTIUM	57249	3.00E-004					1.1E-001 N	1.1E+000 N	4.1E+001 N	3.1E+002 N	2.3E+001 N	8.3E-003	1.7E-001 N
STYRENE	100425	2.00E-001	1.50E-005 H				4.5E-007 C	4.2E-008 C	2.1E-008 C	1.9E-005 C	4.3E-006 C	4.3E-007	8.6E-006 C
2,3,7,8-TETRACHLORODIBENZODIOXIN	1746016	3.00E-004					1.1E-001 N	1.1E+000 N	4.1E+001 N	3.1E+002 N	2.3E+001 N	3.3E-002	6.6E-001 N
1,2,4,5-TETRACHLOROBENZENE	85943	3.00E-002	2.60E-002 I				4.1E-001 C	2.4E-001 C	1.2E-001 C	1.1E+002 C	2.5E+001 C	2.0E-004	4.0E-003 C
1,1,1,2-TETRACHLOROETHANE	630208	6.00E-002 P	2.00E-001 I				5.3E-002 C	3.1E-002 C	1.6E-002 C	1.4E+001 C	3.2E+000 C	3.4E-005	6.6E-004 C
1,1,2,2-TETRACHLOROETHANE	78045	1.00E-002	5.4E-001 O	1.4E-001 E	2.00E-002 O		1.0E-001 C	3.1E-001 C	5.8E-003 C	5.3E+000 C	1.2E+000 C	2.3E-004	4.7E-003 C
TETRACHLOROETHENE	127184	3.00E-002					1.1E-003 N	1.1E+002 N	4.1E+001 N	3.1E+004 N	2.3E+003 N		
2,3,4,6-TETRACHLOROPHENOL	58902						3.3E-003 C	3.1E-004 C	1.6E-004 C	1.4E-001 C	3.2E-002 C		
P.A.A.-TETRACHLOROTOLUENE	5218251						1.7E-005 N	8.4E-004 N	4.2E-001 C	3.8E+002 C	8.4E+001 C		
1,1,1,2-TETRAFLUOROETHANE	811972	2.00E-001 E	7.6E-003 E	8.8E-002 E	8.8E-003 E		8.8E+000 C	9.2E-001 C	3.7E+001 N	1.0E+004 N	7.8E+002 N	1.8E-001	3.6E+000 N
TETRAHYDROFURAN	109699	1.00E-002 H					2.6E+000 N	2.6E-001 N	9.5E-002 N	7.2E+001 N	5.5E+000 N		
TETRYL	479458	7.00E-005 O					3.3E+000 N	3.3E-001 N	1.2E-001 N	9.2E+001 N	7.0E+000 N		
THALLIUM	7440280	8.00E-005 I					2.9E+000 N	2.9E-001 N	1.1E-001 N	8.2E+001 N	6.3E+000 N		
THALLIUM ACETATE	583889	8.00E-005 I					2.9E+000 N	2.9E-001 N	1.1E-001 N	8.2E+001 N	6.3E+000 N		
THALLIUM CARBONATE	653739	8.00E-005 I					3.3E+000 N	3.3E-001 N	1.2E-001 N	9.2E+001 N	7.0E+000 N		
THALLIUM CHLORIDE	779120	8.00E-005 I					2.9E+000 N	2.9E-001 N	1.1E-001 N	8.2E+001 N	6.3E+000 N		
THALLIUM NITRATE	10102451	8.00E-005 I					3.3E+000 N	3.3E-001 N	1.2E-001 N	9.2E+001 N	7.0E+000 N		
THALLIUM SULFATE (2:1)	7448186	8.00E-005 I					2.9E+000 N	2.9E-001 N	1.1E-001 N	8.2E+001 N	6.3E+000 N		
THIOBENCARB	28248776	1.00E-002 I					3.7E+002 N	3.7E+001 N	1.4E+001 N	1.0E+004 N	7.8E+002 N		
TIN	7440315	6.00E-001 H					2.2E+004 N	2.2E+003 N	8.1E+002 N	6.1E+005 N	4.7E+004 N		
TITANIUM	7440326	4.00E-000 E					1.5E-005 N	3.1E-001 N	8.4E+003 N	4.1E+008 N	3.1E+005 N		
TITANIUM DIOXIDE	13463877	4.00E-000 E					1.5E-005 N	3.1E-001 N	8.4E+003 N	4.1E+008 N	3.1E+005 N		
TOLUENE	108883	2.00E-001 I					7.5E+002 N	4.2E+002 N	2.7E+002 N	2.0E+005 N	1.6E+004 N		
TOLUENE-2,4-DIAMINE	95807	3.20E+000 H					2.1E-002 C	2.0E-003 C	9.9E-004 C	8.9E-001 C	2.0E+001 C		
TOLUENE-2,5-DIAMINE	95705	8.00E-001 H					2.2E+004 N	2.2E+003 N	8.1E+002 N	6.1E+005 N	4.7E+004 N		
TOLUENE-2,6-DIAMINE	823405	2.00E-001 H					7.3E+003 N	7.3E+002 N	2.7E+002 N	2.0E+005 N	1.6E+004 N		
P-TOLUIDINE	106490	1.90E-001 H					3.5E-001 C	3.3E-002 C	1.7E-002 C	1.5E+001 C	3.4E+000 C		
TOXAPHENE	8001352	1.10E+000 I					6.1E-002 C	5.7E-003 C	2.9E-003 C	2.8E+000 C	5.8E+001 C		
1,2,4-TRIBROMOBENZENE	615543	5.00E-003 I					1.8E+002 N	1.8E+001 N	8.8E+000 N	5.1E+003 N	3.9E+002 N		
TRIBUTYL TIN OXIDE	96359	3.00E-004 I					1.1E-001 N	1.1E+000 N	4.1E+001 N	3.1E+002 N	2.3E+001 N		

Chemical	CAS	RIDo mg/kg/d	CSFo 1/mg/kg/d	RIDI mg/kg/d	CSFi 1/mg/kg/d	VOC ug/l	Risk-based concentrations					Region III SSIs		
							Top water ug/l	Ambient air ug/m3	Fish mg/kg	Soil mg/kg	Industrial mg/kg	Residential mg/kg	Soil for groundwater migration DAF 1 mg/kg	DAF 20 mg/kg
2,4,6-TRICHLOROANILINE	634935	1.00E-002 I	3.40E-002 H	1.00E-003 P	1.00E-003 P	Y	2.0E+000 C	1.8E-001 C	9.3E-002 C	8.4E+001 C	1.9E+001 C	1.9E+001 C	1.4E-002	2.8E+001 N
1,2,4-TRICHLOROBENZENE	120821	2.80E-001 E		6.30E-001 P	6.30E-001 P	Y	7.2E+000 N	3.7E+000 N	1.4E+001 N	1.0E+004 N	7.8E+002 N	7.8E+002 N	3.0E+000	6.0E+001 N
1,1,1-TRICHLOROETHANE	71556	4.00E-003 I		5.70E-002 I	5.80E-002 I	Y	3.2E+003 N	2.3E+003 N	3.8E+002 N	2.9E+005 N	2.2E+004 N	2.2E+004 N	3.9E+005	7.8E+004 C
1,1,2-TRICHLOROETHANE	79005	4.00E-003 I		5.70E-002 I	5.80E-002 I	Y	1.9E+001 C	1.1E-001 C	5.5E-002 C	5.0E+001 C	1.1E+001 C	1.1E+001 C	1.3E+005	2.6E+004 C
TRICHLOROETHENE	79016	3.00E-004 E	4.00E-001 E	1.00E-002 E	4.00E-001 E	Y	2.9E+002 C	1.8E-002 C	7.9E-003 C	7.2E+003 C	1.6E+000 C	1.6E+000 C	1.3E+005	2.6E+004 C
TRICHLOROFLUOROMETHANE	75694	3.00E-001 I		2.00E-001 A	2.00E-001 A	Y	1.3E+003 N	7.3E-002 N	4.1E+002 N	3.1E+005 N	2.3E+004 N	2.3E+004 N	1.1E+000	2.3E+001 N
2,4,5-TRICHLOROPHENOL	95854	1.00E-001 I	1.00E-002 I		1.00E-002 I		3.7E+003 N	3.7E-002 N	1.4E+002 N	1.0E+005 N	7.8E+003 N	7.8E+003 N		
2,4,6-TRICHLOROPHENOL	88062	1.00E-002 I	1.00E-002 I		1.00E-002 I		6.1E+000 C	6.3E-001 C	2.9E+002 C	2.8E+002 C	5.8E+001 C	5.8E+001 C	9.8E-002	2.0E+000 N
2,4,5-T	93765	8.00E-003 I					2.9E+002 N	3.7E-001 N	1.4E+001 N	1.0E+004 N	7.8E+002 N	7.8E+002 N	1.1E+000	2.1E+001 N
2-(2,4,5-TRICHLOROPHENOXY)PROPIONIC ACID	93721	8.00E-003 I					2.9E+002 N	3.7E-001 N	1.4E+001 N	1.0E+004 N	7.8E+002 N	7.8E+002 N	1.1E+000	2.1E+001 N
1,1,2-TRICHLOROPROPANE	88076	5.00E-003 I	2.00E+000 E	1.4E-003 E	1.4E-003 E	Y	3.0E+001 N	1.8E-001 N	8.8E+000 N	5.1E+003 N	3.9E+002 N	3.9E+002 N	1.2E-002	2.5E+001 N
1,2,3-TRICHLOROPROPENE	96184	1.00E-002 P		3.00E-004 P	3.00E-004 P	Y	5.3E+003 C	3.1E-003 C	1.4E-003 C	1.4E+000 C	3.2E+001 C	3.2E+001 C	1.8E-006	3.6E+005 C
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	96185	1.00E-002 P		3.00E-004 P	3.00E-004 P	Y	2.2E+000 N	1.1E+000 N	1.4E+001 N	1.0E+004 N	7.8E+002 N	7.8E+002 N	8.8E-004	1.8E+002 N
1,2,4-TRIMETHYLBENZENE	78131	3.00E-001 I		8.80E+000 H	8.80E+000 H	Y	5.9E+004 N	3.1E+004 N	4.1E+004 N	3.1E+007 N	2.3E+006 N	2.3E+006 N	1.2E-002	2.3E+003 N
1,3,5-TRIMETHYLBENZENE	95638	5.00E-002 P		1.70E-003 P	1.70E-003 P	Y	1.2E+001 N	6.2E+000 N	8.8E+001 N	5.1E+004 N	3.9E+003 N	3.9E+003 N		
TRIMETHYL PHOSPHATE	108878	5.00E-002 P	3.70E-002 H			Y	1.2E+001 N	6.2E+000 N	8.8E+001 N	5.1E+004 N	3.9E+003 N	3.9E+003 N		
1,3,5-TRINITROBENZENE	512581	3.00E-002 I					1.8E+000 C	1.7E-001 C	8.8E-002 C	7.7E+001 C	1.7E+001 C	1.7E+001 C		
2,4,6-TRINITROTOLUENE	98354	3.00E-002 I					1.1E+003 N	1.1E+002 N	4.1E-001 N	3.1E+004 N	2.3E+003 N	2.3E+003 N		
URANIUM (SOLUBLE SALTS, from RIS)	11967	5.00E-004 I	3.00E-002 I				2.2E+000 C	2.1E-001 C	1.1E-001 C	9.9E+001 C	2.1E+001 C	2.1E+001 C		
URANIUM (SOLUBLE SALTS, from RIS)	7440611	3.00E-003 I					1.1E+002 N	1.1E-001 N	4.1E+000 N	3.1E+003 N	2.3E+002 N	2.3E+002 N		
URANIUM (SOLUBLE SALTS, provisional)	7440811	2.00E-004 E					7.3E+000 N	7.3E-001 N	2.7E+001 N	2.0E+002 N	1.6E+001 N	1.6E+001 N		
**VANADIUM	7440822	1.00E-003 E					3.7E+001 N	3.7E+000 N	1.4E+000 N	1.0E+003 N	7.8E+001 N	7.8E+001 N	3.7E+001	7.3E+002 N
VANADIUM PENTOXIDE	1314621	9.00E-003 I	2.00E-002 H				3.3E+002 N	3.3E-001 N	1.2E+001 N	9.2E+003 N	7.0E+002 N	7.0E+002 N		
VANADIUM SULFATE	16785612	2.00E-002 H					7.3E+002 N	7.3E-001 N	2.7E+001 N	2.0E+002 N	1.6E+001 N	1.6E+001 N		
VINCLOZOLIN	50471448	2.50E-002 I					9.1E+002 N	9.1E-001 N	3.4E+001 N	2.6E+004 N	2.0E+003 N	2.0E+003 N		
VINYL ACETATE	108054	1.00E+000 H				Y	4.1E+002 N	2.1E+002 N	1.4E+003 N	1.0E+006 N	7.8E+004 N	7.8E+004 N	8.7E-002	1.7E+000 N
VINYL CHLORIDE (see cover memos)	75014	3.00E-003 I	1.40E+000 I	2.8E-002 I	3.00E-002 I	Y	1.5E-002 C	7.2E-002 C	4.4E-003 C	4.0E+000 C	2.3E+001 N	2.3E+001 N	6.2E-006	1.2E+004 C
VINYL CHLORIDE: adult (see cover memos)	75014	3.00E-003 I	7.20E-001 I	2.8E-002 I	1.5E-002 I	Y	1.1E+001 N	1.1E+000 N	4.1E-001 N	3.1E+002 N	2.3E+001 N	2.3E+001 N	2.2E-002	4.4E+001 N
WARFARIN	81812	3.00E-004 I					2.1E+002 N	1.1E-002 N	2.7E+002 N	2.0E+005 N	1.8E+004 N	1.8E+004 N	1.5E-001	3.0E+000 N
XYLENES	1330207	2.00E-001 I					1.1E+001 N	1.1E+000 N	4.1E-001 N	3.1E+002 N	2.3E+001 N	2.3E+001 N	6.8E+002	1.4E+004 N
ZINC	7440666	3.00E-001 I					1.8E+003 N	1.8E+002 N	8.8E-001 N	5.1E+004 N	3.9E+003 N	3.9E+003 N		
ZINC PHOSPHIDE	1314847	3E-004 I					1.8E+003 N	1.8E+002 N	8.8E-001 N	5.1E+004 N	3.9E+003 N	3.9E+003 N		
ZINEB	12126377	5E-002 I					1.8E+003 N	1.8E+002 N	8.8E-001 N	5.1E+004 N	3.9E+003 N	3.9E+003 N		

Sources: 1 = RIS; H = HEAST; A = HEAST Alternative; C = Withdrawn from RIS or HEAST

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R = EPA-NCEA provisional value; O = other; P = EPA-NCEA provisional value



MARSH**CERTIFICATE OF INSURANCE**CERTIFICATE NUMBER
NYC-002197360-01**PRODUCER**MARSH USA INC.
ATTN: DENISE HART-HOUSTON
Denise.D.Hart-Houston@marsh.com
200 CLARENDON STREET
BOSTON, MA 02116
617-421-0290 (PH) / 617-421-0344 FAX

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER OTHER THAN THOSE PROVIDED IN THE POLICY. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES DESCRIBED HEREIN.

COMPANIES AFFORDING COVERAGECOMPANY
A ZURICH AMERICAN INS.COCOMPANY
B STEADFAST INSURANCE COMPANYCOMPANY
CCOMPANY
D

575761-ALL-

INSUREDENSR CORPORATION
ENSR INTERNATIONAL CORP.
2 TECHNOLOGY PARK DRIVE
WESTFORD, MA 01886**COVERAGES**

This certificate supersedes and replaces any previously issued certificate for the policy period noted below. 2

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE DESCRIBED HEREIN HAVE BEEN ISSUED TO THE INSURED NAMED HEREIN FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THE CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, CONDITIONS AND EXCLUSIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY	GLO 3739374-04	03/31/04	03/31/05	GENERAL AGGREGATE \$ 2,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				PRODUCTS - COMP/OP AGG \$ 2,000,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				PERSONAL & ADV INJURY \$ 2,000,000
	<input type="checkbox"/> OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE \$ 2,000,000
					FIRE DAMAGE (Any one fire) \$ 50,000
					MED EXP (Any one person) \$ 5,000
A	AUTOMOBILE LIABILITY	BAP2297676-08 (AOS) BAP5224854-03 (VA) TAP2155923-09 (TX)	03/31/04	03/31/05	COMBINED SINGLE LIMIT \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident) \$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE \$
	<input checked="" type="checkbox"/> HIRED AUTOS				
	<input checked="" type="checkbox"/> NON-OWNED AUTOS				
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT \$
	<input type="checkbox"/> ANY AUTO				OTHER THAN AUTO ONLY: \$
					EACH ACCIDENT \$
					AGGREGATE \$
B	EXCESS LIABILITY	SUO 3826387-02	03/31/04	03/31/05	EACH OCCURRENCE \$ 2,000,000
	<input checked="" type="checkbox"/> UMBRELLA FORM				AGGREGATE \$ 2,000,000
	<input type="checkbox"/> OTHER THAN UMBRELLA FORM				RETAINED LIMIT \$ 10,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	WC 5224737-03	03/31/04	03/31/05	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER
	<input type="checkbox"/> THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE:				EL EACH ACCIDENT \$ 1,000,000
	<input checked="" type="checkbox"/> INCL <input type="checkbox"/> EXCL				EL DISEASE-POLICY LIMIT \$ 1,000,000
					EL DISEASE-EACH EMPLOYEE \$ 1,000,000
A	OTHER E&O COVERAGE Prof.Environmental Consultants	PEC 820642909	03/31/04	03/31/05	PROFESSIONAL LIABILITY \$1MM OCCURRENCE/\$2MM AGGREGATE POLLUTION LIABILITY \$2MM OCCURRENCE/\$4MM AGGREGATE

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

NEWELL HOLDINGS DELAWARE, INC.; HANS DIETZ APARTMENTS AND ROCK SPRINGS ENTERPRISES ARE NAMED AS AN ADDITIONAL INSURED AS REQUIRED BY WRITTEN CONTRACT, BUT LIMITED TO THE OPERATIONS OF THE NAMED INSURED.

CERTIFICATE HOLDERNEWELL HOLDINGS DELAWARE, INC.
10 B GLENDALE PARKWAY
ATLANTA, GA 30328**CANCELLATION**

SHOULD ANY OF THE POLICIES DESCRIBED HEREIN BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE INSURER AFFORDING COVERAGE WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED HEREIN, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER AFFORDING COVERAGE, ITS AGENTS OR REPRESENTATIVES, OR THE ISSUER OF THIS CERTIFICATE.

MARSH USA INC.

BY: Edward R Ford

Edward R. Ford

MM1(3/02)

VALID AS OF: 11/23/04

AR100100